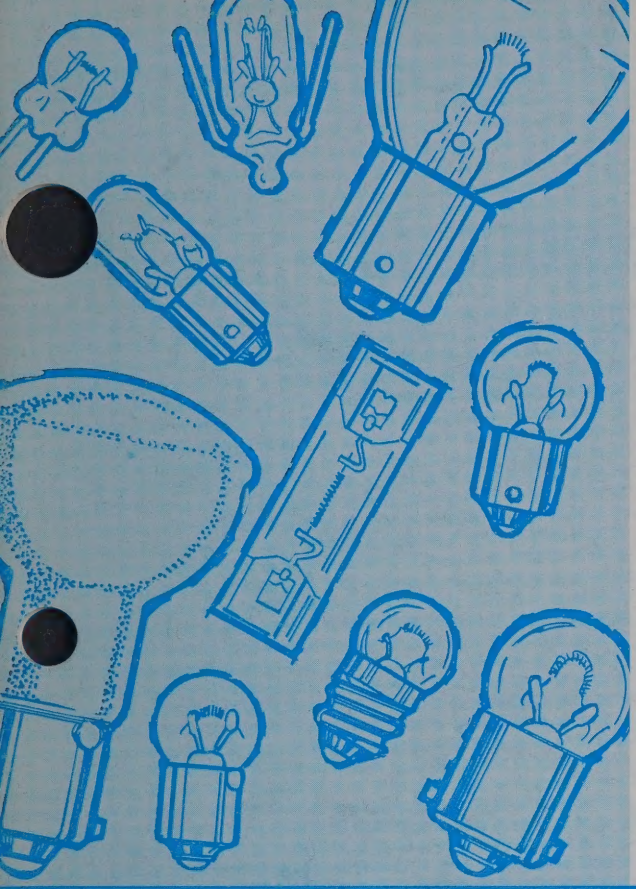


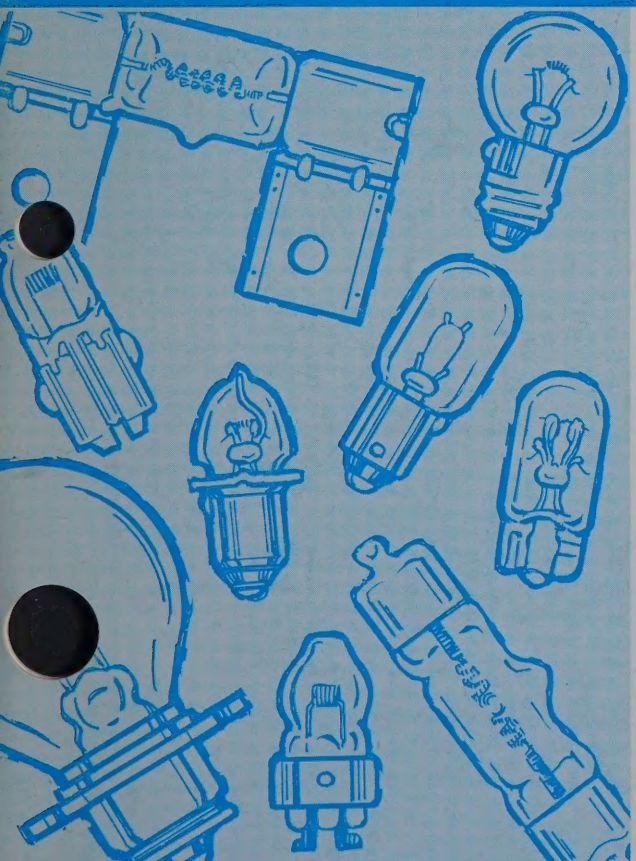
520
WEATHERLY INDEX

Miniature Lamp Catalog 3-5169

REVISED JUNE, 1975
SUPERSEDES ISSUE DATED JAN., 1974

MINIATURE LAMPS

INCANDESCENT FLUORESCENT



Other MINIATURE LAMP PRODUCTS DEPARTMENT CATALOGS INCLUDE:

- Sealed Beam Lamps, 3-5211
- Sub-Miniature Lamps, 3-6252R1
- Glow Lamps, 3-6254
- Index of all Lamps, 3-6255R

MINIATURE LAMP PRODUCTS DEPARTMENT

GENERAL ELECTRIC

GENERAL ELECTRIC

CATALOG OF MINIATURE LAMPS

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IMPORTANT NOTICE

The data and recommendations in this catalog, as well as any additional information our representatives may furnish, are for general information only. They should not be taken as representations or warranties as to the suitability of any lamp for any particular application or use, or as to its performance under any particular conditions of use. Possible applications and conditions of use are many, and beyond our control.

Since new information is constantly being uncovered through research and testing, it is not possible to know at any given time all information with respect to a lamp or its performance. This is particularly true of newer lamps. It is, therefore, up to the purchaser to make his own determination as to the suitability of a product for his intended use and to assume the responsibility for that determination.

When any equipment design is involved, please communicate with your General Electric Lamp Representative for latest deisgn information.

INTRODUCTION

Most General Electric Miniature Lamps are designed for operation on low-voltage sources of power, such as battery-generator systems, dry cell or storage batteries, or transformers.

Manufacturers and designers of equipment requiring miniature lamps should select lamps of established design wherever possible for maximum economy as well as ease of replacement through regular trade channels.

Lamps are grouped in this catalog by bulb sizes. The letter refers to the shape of the bulb and the number is the approximate diameter in eighths of an inch. The diameter is also given in inches and followed by the metric equivalent (in parentheses) for convenience. The English units are the over-riding dimensions. Lamps are listed according to design volts in ascending order within the particular group.

You will find two cross-reference lists on pages 36 and 38. One groups lamps by primary applications and the other lists lamps in numerical sequence.

The Miniature Lamp Products Department of General Electric offers application engineering assistance to all customers in applying miniature lamps in product design. Contact your local GE district office which is listed on the back cover page for additional and latest technical information.

ABBREVIATIONS

A — Amperes
Bay. — Bayonet
C.P. — Candlepower
Cand. — Candelabra
D.C. —Double Contact
Flg. — Flanged
Index — Indexing
Min. — Miniature
Pf. — Prefocus
Sc. — Screw
S.C. — Single Contact
Spec. — Special
Term. — Terminals
V — Volts
W — Watts

LAMP NUMBER

Lamps are marked with General Electric identification and a trade number. The trade number is recorded with the American National Standards Institute and is uniform throughout the industry. It completely identifies a lamp and is sufficient identification for ordering purposes.

PRIMARY SERVICE

Present major usages of a lamp are shown in the primary applications column. Lamps may be and often are used in other applications, wherever their design characteristics meet the requirements.

DESIGN VOLTS

Design volts show the voltage at which a lamp is designed for rated ampere, candlepower and laboratory-life characteristics.

DESIGN AMPERES OR WATTS

Design amperes is the current flowing through a lamp when operated at its design voltage. It is subject to manufacturing tolerances. Some lamps have a watts rating rather than amperes. Wattage is obtained by multiplying the design volts by the design amperes.

CANDLEPOWER

The value shown in the candlepower column is the average initial mean-spherical-candlepower (mscp) at design voltage. It is subject to manufacturing tolerances. Mean-spherical-candlepower is the generally accepted method of rating the total light output of miniature lamps. To convert mean-spherical-candlepower to lumens, multiply by 12.57 (4π).

LIGHT CENTER LENGTH

The light center length is measured from the geometric center of the light source to a particular point of the base. This point is shown below for the base types used.

Screw—End of bottom base contact.
Bayonet—Top of base pins.
S.C. or D.C. Prefocus—Bottom of indentations on prefocusing collar.
S.C. Miniature Flanged — Top of bosses in flange.
D.C. Index — Top of base pin nearer bottom contacts.
Wedge—Center of notch.
Tab—Center of hole in tab.

MAXIMUM OVERALL LENGTH

The dimension which includes the bulb and base is designated as the overall length of the lamp. In the case of wire terminal lamps, this dimension applies only to the glass portion. The dimension figures listed here are maximum tolerances.

RATED AVERAGE LIFE

Rated average life is that obtained in closely controlled laboratory testing of lamps at their design voltage. It is not necessarily the same as service life where environmental conditions such as shock, vibration, voltage fluctuations, temperature, etc., may result in a shorter average life. For additional information on service life of lamps with extremely long life and low current design, please refer to the discussion on "Lamp Life" page 3 in Sub-Miniature Catalog 3-6252R1.

FIGURE NUMBER

The figure number corresponds to the lamp drawing at the extreme right of the specifications list. *The drawing shows the correct bulb and base, but not necessarily the correct filament, for the lamp listed.* Since many different filaments are used, the drawing shows only one representative filament form. For filament forms refer to page 5.

LINE NUMBER

The line number is used to help find specific lamps. It is not of any technical or ordering significance.

HEAVY DUTY LAMPS

There is a General Electric heavy duty lamp for most automotive sockets. Heavy duty lamps have been designed with heavier wire and lower filament temperatures in an attempt to give longer life and more trouble-free performance. These should be used where the lamps are likely to be subjected to extra shock and vibration.

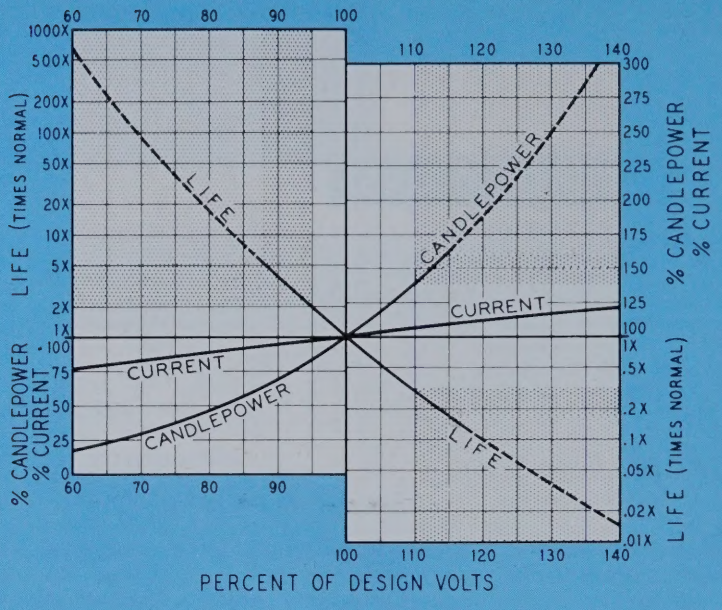
CONSIDER THESE FACTORS

Design factors such as the limitations of — housing space, power source, shock and vibration, light output, wattage, life, and ambient temperature — should be carefully considered when selecting lamps.

Whether a lamp is used for safety, convenience, utility, sales appeal, beauty or a means of saving time, General Electric has such a lamp available.

CHART I

TYPICAL CHARACTERISTIC CURVES



THESE CURVES ARE APPROXIMATIONS ONLY

NOTE:
CALCULATIONS OF CHARACTERISTICS SHOWN IN CHART I ARE APPROXIMATE ONLY BETWEEN 95% & 110% OF RATED VOLTAGE FOR LAMP TYPES WITH 5000 HOURS LIFE OR LESS. CERTAIN LAMP TYPES WILL VARY WIDELY FROM CALCULATED VALUES.

THIS CHART WILL NOT APPLY TO LAMPS WITH LIVES IN EXCESS OF 5,000 HOURS.

This chart does not apply to Halogen cycle lamps. Consult nearest sales office for application information.

1 LIGHT QUANTITY, QUALITY

Where an object or surface is to be illuminated, the quantity of light required depends upon the size of the object, the brightness desired, the contrast with its background and the time available for seeing.

Where light must be projected, either a separate reflector and lamp or a reflectorized lamp may be required. Consideration should be given to beam candlepower and beam spread.

The spectral quality of color of light can be modified by external filters or coatings applied to the bulb.

2 LIGHT, LIFE AND VOLTAGE

For any particular lamp, the light output and life depend upon the voltage at which the lamp is operated. For instance, as approximations, the light output varies as the 3.6 power of the voltage and the life varies inversely as the 12th power of the voltage. Chart 1 illustrates the effect of overvoltage or undervoltage applied to a lamp on its current, life, and light (candlepower) output. Indicated values (except for long life lamps) are reasonably reliable, between 95% and 110% rated volts. Beyond that, indicated characteristics may not be realized because of the increasing influence of factors which cannot be incorporated into the chart.

The data applies only to operation on direct current or sine-wave alternating current. The data (particularly for lamp life) does not apply accurately for lamp operation on half-wave rectified voltage, semi-conductor dimming devices and constant current operation.

3 MECHANICAL STRENGTH

Low voltage, high current incandescent lamps are best suited for operation under conditions of shock and vibration. Other factors which affect strength are the resonant frequency of the lead wires, support wires, and filament form. Most radio panel lamps of 6.3 volts and under incorporate mounts whose resonant frequency has been synchronized with that of the coiled filament to withstand shock and vibration. Where rough service conditions are encountered, screw base lamps should be avoided, since they may loosen in their sockets.

4 POWER SOURCES

In battery applications, the mean effective voltage delivered is generally higher than the average volts. Therefore, the mean effective voltage should be the design voltage of the lamp. Design voltages for flashlight lamps have been determined by extensive tests.

Filament lamp ratings are predicated on operation at constant voltage. When operated from a higher-than-rated voltage in series with a dropping resistor, the effect is the same as operating at a constant current. Since the lamp resistance changes with operating life, the voltage drop across the lamp will increase; hence, the lamp life experienced will generally be about one-half that resulting from constant-voltage operation.

When selecting a transformer or resistor, consideration should be given to lamp ampere tolerances and the regulation characteristics of the component.

5 SPACE

Tolerances of bulb diamerers, light center length and overall length should be carefully considered by designers in specifying lamp housings. These tolerances and more detailed drawings are available from your local GE Miniature Lamp Sales Office.

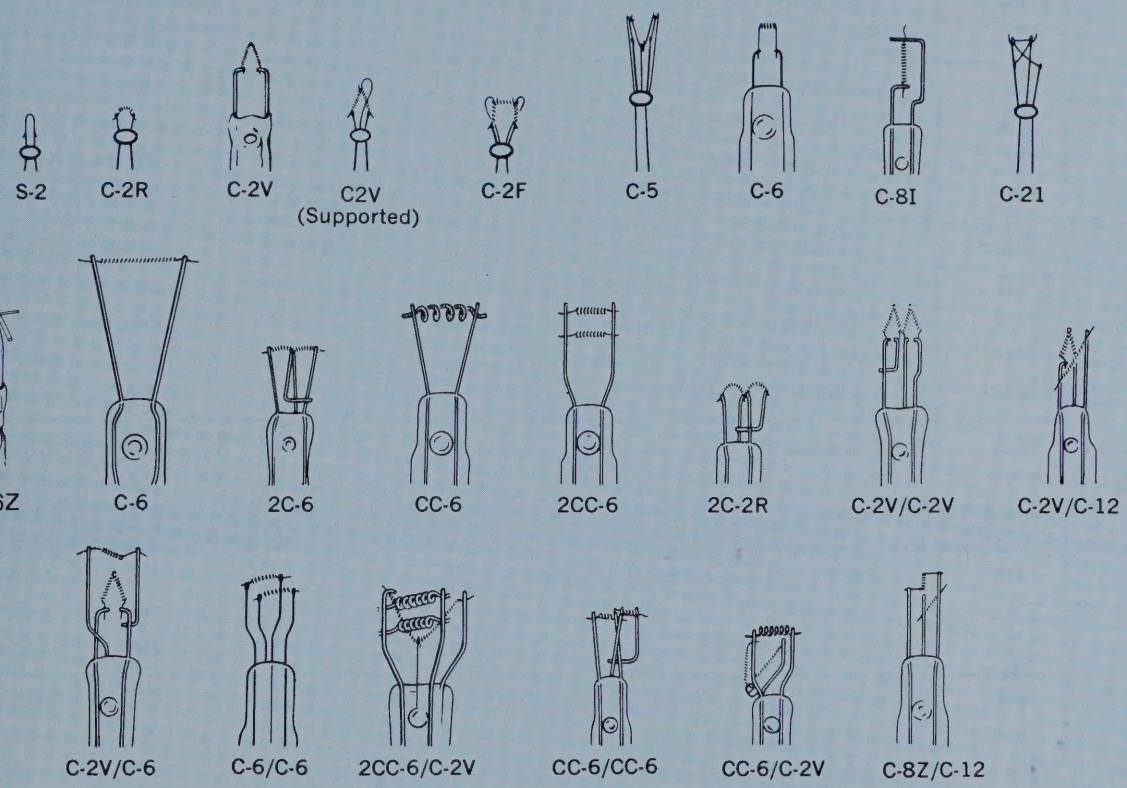
6 AMBIENT TEMPERATURE

It is well to consider the lamp housing from the standpoint of radiation, absorption and ventilation as well as extraneous heat.

Normal variations in ambient temperature do not affect the performance of miniature lamps. Above 350°F, the solder on conventional lamps may soften, deform or melt and the basing cement loosen. The new wedge base lamps can be operated in ambients up to 450°F.

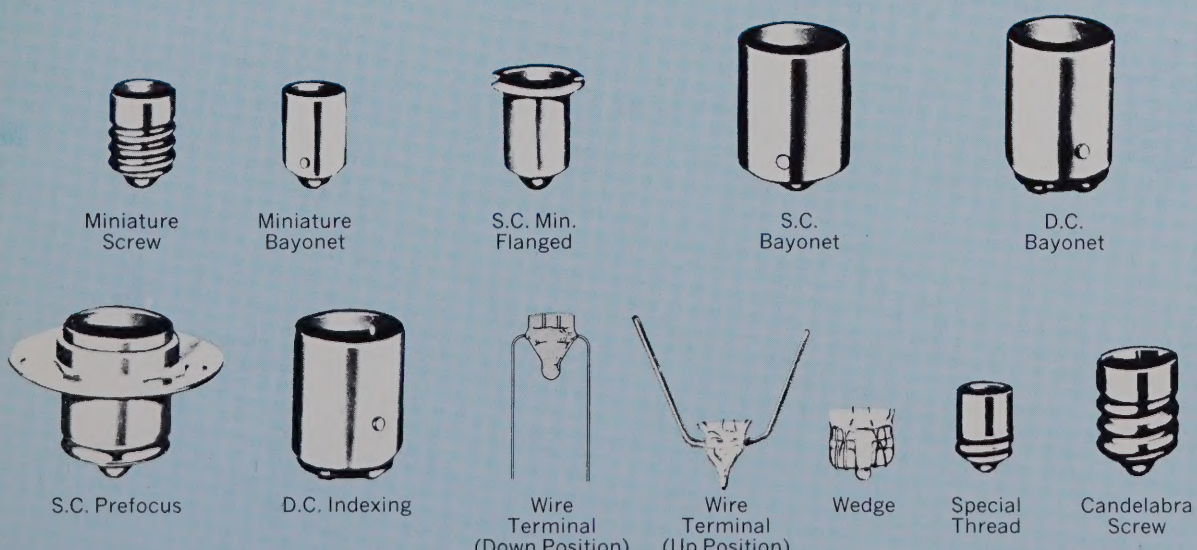
FILAMENTS

The almost universally used lamp filament material is tungsten because of its high melting point at incandescence. The filament may be straight wire, a coil or a coiled coil (indicated respectively by the letters, S, C, and CC). Coiling the filament wire effectively shortens the filament length so that smaller bulbs can be used. In addition, in gas-filled lamps, coiling the wire reduces thermal losses and increases efficiency. Filament designations consist of a prefix letter to indicate whether the wire is straight or coiled, and a number to indicate its physical configuration on the supports.



BASES

Bases provide electrical contact to the lamp and, in most cases, also support the lamp in the fixture. Bayonet types are generally preferred over screw types when vibration is present. Flanged or collared types are usually associated with requirements for filament location. Wedge base types reduce socket size and complexity.



MINIATURE LAMPS

ELECTRICAL SPECIFICATIONS

Line No.	Lamp No.	Primary Application	Design Volts	Design Amps or Watts	Candle Power
B-3½ BULB 7/16 IN. (11mm) DIAMETER[2]					
6-1	PR8	Flashlight—2 Volt Storage Battery	1.9	.6A	.65 [2]
-2	PR4	Flashlight—2C Cells	2.33	.27A	.40 [2]
-4	PR2	Flashlight—2D Cells	2.38	.50A	.80 [2]
-5	PR6	Flashlight—2D Industrial Cells	2.47	.30A	.45[2]
-6	PR9	Flashlight—2D Cells	2.7	.15A	.25 [2]
-7	395X	Flashlight—2D Cells Special Service	3.0	.07A	.15 [2]
-8	PR3	Flashlight—3D Cells	3.57	.50A	1.50 [2]
-10	PR7	Flashlight—3D Industrial Cells	3.7	.30A	.90 [2]
-11	PR13	Hand Lantern—4F Cells	4.75	.50A	2.20 [2]
-12	PR15	Hand Lantern—8F Cells in series parallel	4.82	.50A	1.9 [2]
-13	PR17	Hand Lantern—4F Cells	4.9	.30A	1.2 [2]
-14	PR12	Flashlight—5D Cells	5.95	.50A	3.10 [2]
-15	PR18	Flashlight—6D Cells [61,14]	7.2	.55A	5.5 [2]
-16	PR20	Flashlight—7D Cells [61,14]	8.63	.50A	5.0 [2]
-17	PR16	Auto. Hand Spotlamp	12.5	.25A	2.7 [2]
B-6 BULB ¾ IN. (19mm) DIAMETER[2]					
-18	1317	Aircraft, Emergency Lighting (Krypton gas)	6.0	.51A	3.40
-19	209	Auto. Interior	6.5	1.78A	15
-20	210	Auto. Interior and Marine	6.5	1.78A	15
-23	1003	Auto. Interior	12.8	.94A	15
-24	1004	Auto. Interior and Marine	12.8	.94A	15
-25	105	Auto	12.8	1.0A	12
-26	1309	Aircraft Interior	28	.52A	15
G-3½ BULB 7/16 IN. (11mm) DIAMETER[2]					
-32	123	Flashlight 1D Cell	1.25	.30A	.10 [2]
-33	131	Bicycle 1D Cell	1.3	.10A	.03 [2]

[2] Approximate. [61] Consult nearest Sales Office for application information.
[14] Excessive wattage for bulb.

PHYSICAL SPECIFICATIONS

Base	B Vacuum C Gas Filled	Filament Designation	Light Center Length (Inches)	Max. Overall Length (Inches)	Rated Average Life (Hours)	Fig. No.	Line No.
S. C. Miniature Flanged	B	C-2R	¼	1¼	10	1	6-1
S. C. Miniature Flanged	B	C-2R	¼	1¼	10	1	-2
S. C. Miniature Flanged	B	C-2R	¼	1¼	15	1	-4
S. C. Miniature Flanged	B	C-2R	¼	1¼	30	1	-5
S. C. Miniature Flanged	B	C-2R	¼	1¼	45	1	-6
S. C. Miniature Flanged	B	S-2	¼	1¼	50	1	-7
S. C. Miniature Flanged	B	C-2R	¼	1¼	15	1	-8
S. C. Miniature Flanged	B	C-2R	¼	1¼	30	1	-10
S. C. Miniature Flanged	C	C-2R	¼	1¼	15	1	-11
S. C. Miniature Flanged	C	C-2R	¼	1¼	30	1	-12
S. C. Miniature Flanged	B	C-2R	¼	1¼	30	1	-13
S. C. Miniature Flanged	C	C-2R	¼	1¼	15	1	-14
S. C. Miniature Flanged	C	C-2R	¼	1¼	3	1	-15
S. C. Miniature Flanged	C	C-2R	¼	1¼	15	1	-16
S. C. Miniature Flanged	B	C-2R	¼	1¼	50	1	-17
S. C. Bayonet	C	C-6	1⅛	1¾	100	3	-18
S. C. Bayonet	C	C-6	1 1/16	1¾	100	3	-19
D. C. Bayonet	C	C-6	1 1/16	1¾	100	4	-20
S. C. Bayonet	C	C-6	1 1/16	1¾	200	3	-23
D. C. Bayonet	C	C-6	1 1/16	1¾	200	4	-24
S. C. Bayonet	C	C-6	1 1/16	1¾	500	3	-25
S. C. Bayonet	C	2C-2R	1 1/16	1¾	300	3	-26
Miniature Screw	B	S-2	23/32	15/16	10	8	-32
Miniature Screw	B	S-2	23/32	15/16	50	8	-33

LAMPS SHOWN ACTUAL SIZE

Fig. 1

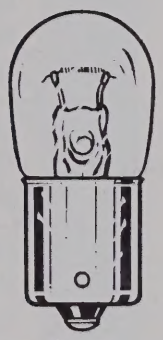


Fig. 3

Fig. 4

Fig. 8

(G-3½ BULB CONT.)

Line No.	Lamp No.	Primary Application	Design Volts	Design Amps or Watts	Candle Power
8-1	458	Special Service	1.5	.20A	.12 [2]
-2	233	Flashlight 2C Cells	2.33	.27A	.42 [2]
-3	245	Flashlight 2D Cells	2.46	.50A	.90 [2]
-4	14	Flashlight 2D Cells	2.47	.30A	.50 [2]
-5	354	Instrument 2D Cells	2.47	.30A	.50 [2]
-6	10	Indicator, L.C.L. measured from bottom of pins [69]	2.5	.50A	.50 [2]
-8	352X	Special Service	3.0	.07A	.15 [2]
-10	13	Flashlight 3D Cells	3.7	.30A	.98 [2]
-11	1438	Indicator	3.8	.43A	1.6 [2]
-14	12	Radio [69]	6.3	.15A	.35 [2]
-15	130	Radio, TV and Indicator	6.3	.15A	.29 [2]
-17	137	Radio, TV and Indicator	6.3	.25A	.55 [2]
-17a	219	Radio, TV	6.3	.25A	.50 [2]
-18	612	Special Service [69]	6.3	.25A	.65 [2]
-19	50	Toy Train	7.5	.22A	1
-20	51	Auto and Indicator	7.5	.22A	1
-21	51AF	Indicator, All frosted (Spray Method) .	7.5	.22A	—
-22	1446	Toy Train	12.0	.20A	1.7 [2]
-23	363	Toy Train	14.0	.20A	2 [2]
-24	1449	Toy Train	14.0	.20A	2 [2]
-25	19	Auto and Toy Train [69]	14.4	.10A	.9 [2]
-26	52	Indicator	14.4	.10A	.75 [2]
-27	250	Auto and Instrument	14.4	.12A	.50
-28	2172D	Instrument, Approx. ⅝" leads—down position [74]	14.4	.12A	1
-29	53	Auto and Indicator	14.4	.12A	1
-30	53X	Auto. Heavy duty	14.4	.12A	.75 [2]
-31	53R	Auto. Outside coated red	14.4	.12A	—
-32	1445	Auto. (See Line 8-34 for rating @ 18 Volts)	14.4	.135A	.7
-33	1447	Toy Train	18	.15A	1.5 [2]
-34	1445	Toy Train	18	.15A	1.5 [2]
-36	1450	Indicator	24	.035A	.23 [2]
-37	356	Aircraft [61,14]	28	.17A	3.5 [2]

G-4½ BULB 9/16 IN. (14mm) DIAMETER [2]

-39	401	Toy, Flasher lamp 1D Cell [61,15]	1.25	.25A	.09 [2]
-40	136	Hand Lantern, 1 No. 6 Cell	1.25	.60A	.20 [2]
-42	406	Toy, Flasher lamp, 2D Cells	2.6	.30A	.43 [2]

[2] Approximate.
[14] Excessive wattage for bulb.
[15] Limited mechanical strength.
[61] Consult nearest Sales Office for application information.

[69] Not recommended for new OEM applications — suggested for new design are wedge base lamps such as GE Lamp Numbers 159, 259, and 161.

[74] This is a butt seal wire terminal lamp. The glass-to-metal seal and tip is fragile. Therefore, any bending of the wire terminals should not be closer to glass than ⅛" and soldering within ⅛" of glass seal should be avoided since the heat of the soldering can cause a leak in the seal.

PHYSICAL SPECIFICATIONS

LAMPS SHOWN ACTUAL SIZE

Base	B Vacuum C Gas Filled	Filament Designation	Light Center Length (Inches)	Max. Overall Length (Inches)	Rated Average Life (Hours)	Fig. No.	Line No.
Miniature Screw	B	S-2	23/32	15/16	30	8	8-1
Miniature Screw	B	C-2R	23/32	15/16	10	8	-2
Miniature Screw	B	C-2R	23/32	15/16	15	8	-3
Miniature Screw	B	C-2R	23/32	15/16	15	8	-4
Miniature Bayonet	B	C-2R	1/2	15/16	15	10	-5
Miniature 2-pin	B	C-6	5/8	15/16	3000	9	-6
Miniature Screw	B	S-2	—	15/16	50	8	-8
Miniature Screw	B	C-2R	23/32	15/16	15	8	-10
Miniature Screw	B	C-2R	23/32	15/16	1	8	-11
Miniature 2-pin	B	C-6	5/8	15/16	5000+[44]	9	-14
Miniature Bayonet	B	C-2R	1/2	15/16	5000+[44]	10	-15
Miniature Bayonet	B	C-2R	1/2	15/16	5000+[44]	10	-17
Miniature Bayonet	B	C-2V [13]	.53	15/16	5000+[44]	10	-17a
Miniature 2-pin	B	C-6	5/8	15/16	5000	9	-18
Miniature Screw	B	C-2R	23/32	15/16	1000	8	-19
Miniature Bayonet	B	C-2R	1/2	15/16	1000	10	-20
Miniature Bayonet	B	C-2R	—	15/16	1000	10	-21
Miniature Screw	B	C-2V [13]	—	15/16	250	8	-22
Miniature Bayonet	B	C-2V [13]	—	15/16	250	10	-23
Miniature Screw	B	C-2V [13]	—	15/16	250	8	-24
Miniature 2-pin	B	C-6	5/8	15/16	1000	9	-25
Miniature Screw	B	C-2V [13]	5/8	15/16	1000	8	-26
Miniature Bayonet	B	C-2F	9/16	15/16	3000	10	-27
Wire Terminal	B	C-2V [13]	—	7/8	1000	—	-28
Miniature Bayonet	B	C-2V [13]	1/2	15/16	1000	10	-29
Miniature Bayonet	B	C-2F	1/2	15/16	1000	10	-30
Miniature Bayonet	B	C-2V [13]	—	15/16	1000	10	-31
Miniature Bayonet	B	C-2V [13]	1/2	15/16	2000	10	-32
Miniature Screw	B	C-2V [13]	23/32	15/16	250	8	-33
Miniature Bayonet	B	C-2V [13]	1/2	15/16	250	10	-34
Miniature Bayonet	B	C-2F	1/2	15/16	3000	10	-36
Miniature Bayonet	B	C-2F	1/2	15/16	500	10	-37
Miniature Screw	B	C-6	7/8	1 1/16	15 [3]	11	-39
Miniature Screw	B	S-2	3/4	1 1/16	75	11	-40
Miniature Screw	B	C-2R	7/8	1 1/16	50 [3]	11	-42

[3] Average use life. [13] Supported. [44] At 6.6 volts.

Fig. 9 [69]

Fig. 10

Fig. 11

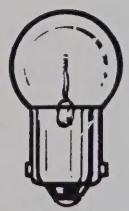


Fig. 12

Fig. 13 [69]

(G-4½ BULB CONT.)

Line No.	Lamp No.	Primary Application	Design Volts	Design Amps or Watts	Candle Power
10-1	407	Hand Lantern, Flasher lamp, 4F Cells	4.9	.30A	1.2 [2]
-3	27	Hand Lantern, 4F Cells	4.9	.30A	1.4 [2]
-4	425	Hand Lantern, 4F Cells	5.0	.50A	2.3 [2]
-5	427	Aircraft, Emergency lighting	5.0	.50A	2.3 [2]
-6	502	Hand Lantern, 4F Cells	5.1	.15A	.6 [2]
-7	503	Hand Lantern, 4F Cells	5.1	.15A	.6 [2]
-8	1406	Indicator	6.0	.04A	.1 [2]
-9	1483	Bicycle, Tail lamp	6.0	.04A	.1 [2]
-10	1482	Bicycle, Headlamp	6.0	.45A	2.2 [2]
-11	607	Indicator, Pilot balloon observation	6.0	.50A	3.7 [2]
-12	31	Flashlight, 5D cells	6.15	.30A	2.0 [2]
-13	605	Flashlight, 5D cells	6.15	.50A	3.4 [2]
-14	405	Signal, Flasher lamp	6.5	.50A	1.9 [2]
-15	455	Indicator, Flasher lamp	6.5	.50A	1.9 [2]
-16	15	Indicator [69]	7.0	.40A	2 [2]
-17	55	Auto and Instrument	7.0	.41A	2
-18	426	Toy Train	8.0	.25A	1.6 [2]
-20	428	Toy Train	12.5	.25A	2.4 [2]
-22	57	Auto and Instrument	14.0	.24A	2
-23	57X	Auto and Instrument	14.0	.24A	2
-25	431	Toy Train	14.0	.25A	2.7 [2]
-26	431R	Toy Train, Outside coated red [61]	14.0	.25A	—
-27	257	Auto and Toy Train, Flasher lamp	14.0	.27A	1.6 [2]
-28	257R	Auto and Toy Train, Flasher lamp. Outside coated red (Silicate)	14.0	.27A	—
-29	258	Toy Train, Flasher lamp	14.0	.27A	1.6 [2]
-30	1895	Auto Truck marker. Heavy duty	14.0	.27A	2
-31	1895G	Auto. Outside coated green [61]	14.0	.27A	—
-33	1895R	Auto. Outside coated red [61]	14.0	.27A	—
-34	293	Auto, Radio. Heavy duty	14.0	.33A	2
-35	432	Toy Train	18.0	.25A	3.5 [2]
-36	433	Toy Train	18.0	.25A	3.5 [2]
-39	456	Auto Instrument Indicator	28.0	.17A	2
G-5 BULB ⅝ IN. (16mm) DIAMETER [2]					
-40	1315	Aircraft, Emergency lighting (Krypton Gas)	2.5	1.0A	1.75 [2]
-41	1458	Coin Machine	20	.25A	4.2 [2]
-42	301	Aircraft	28.0	.17A	3
-43	302	Aircraft	28.0	.17A	3
G-5½ BULB 11/16 IN. (17mm) DIAMETER [2]					
-45	35	Hand Lantern, 2 No. 6 cells	2.5	.80A	1.3 [2]

[2] Approximate.

[61] Consult nearest Sales Office for application information.

[69] Not recommended for new OEM applications — suggested for new design are wedge base lamps such as GE Lamp Numbers 159, 259, and 161.

PHYSICAL SPECIFICATIONS

Base	B Vacuum C Gas Filled	Filament Designation	Light Center Length (Inches)	Max. Overall Length (Inches)	Rated Average Life (Hours)	Fig. No.	Line No.
Miniature Screw	B	C-2R	13/16	1 1/16	50 [3]	11	10-1
Miniature Screw	B	C-2R	23/32	1 1/16	30	11	-3
Miniature Screw	C	C-2R	23/32	1 1/16	15	11	-4
Miniature Bayonet	C	C-2R	1/2	1 1/16	15	12	-5
Miniature Screw	B	C-2R	23/32	1 1/16	100	11	-6
Miniature Bayonet	B	C-2R	1/2	1 1/16	100	12	-7
Miniature Bayonet	B	C-6	5/8	1 1/16	500	12	-8
Miniature Screw	B	C-6	13/16	1 1/16	500	11	-9
Miniature Screw	C	C-2R	13/16	1 1/16	100	11	-10
Miniature Bayonet	C	C-2R	1/2	1 1/16	3	12	-11
Miniature Screw	B	C-2R	23/32	1 1/16	15	11	-12
Miniature Screw	C	C-2R	23/32	1 1/16	15	11	-13
Miniature Screw	C	C-2R	13/16	1 1/16	500 [3]	11	-14
Miniature Bayonet	C	C-2R	9/16	1 1/16	500 [3]	12	-15
Miniature 2-pin	C	C-6	11/16	1 1/16	500	13	-16
Miniature Bayonet	C	C-2R	9/16	1 1/16	500	12	-17
Miniature Screw	B	C-2R	23/32	1 1/16	250	11	-18
Miniature Screw	B	C-2V [13]	23/32	1 1/16	250	11	-20
Miniature Bayonet	B	C-2V [13]	9/16	1 1/16	500	12	-22
Miniature Bayonet	B	C-2F	9/16	1 1/16	500	12	-23
Miniature Bayonet	B	C-2V [13]	1/2	1 1/16	250	12	-25
Miniature Bayonet	B	C-2V [13]	—	1 1/16	250	12	-26
Miniature Bayonet	C	C-2R	9/16	1 1/16	500 [3]	12	-27
Miniature Bayonet	C	C-2R	—	1 1/16	500 [3]	12	-28
Miniature Screw	C	C-2R	13/16	1 1/16	500 [3]	11	-29
Miniature Bayonet	B	C-2F	9/16	1 1/16	2000	12	-30
Miniature Bayonet	B	C-2F	—	1 1/16	2000	12	-31
Miniature Bayonet	B	C-2F	—	1 1/16	2000	12	-33
Miniature Bayonet	B	C-2F	9/16	1 1/16	7500	12	-34
Miniature Screw	B	C-2V [13]	23/32	1 1/16	250	11	-35
Miniature Bayonet	B	C-2V [13]	1/2	1 1/16	250	12	-36
Miniature Bayonet	B	C-2F	9/16	1 1/16	5000	12	-39
S. C. Bayonet	C	C-6	11/16	1 1/4	20	14	-40
Miniature Bayonet	B	C-2V [13]	5/8	1 3/16	250	17	-41
S. C. Bayonet	B	C-2F	11/16	1 1/4	500	14	-42
D. C. Bayonet	B	C-2F	11/16	1 1/4	500	15	-43
Miniature Screw	B	C-2R	7/8	1 1/4	150	18	-45

[3] Average useful life. [13] Supported.

LAMPS SHOWN ACTUAL SIZE

Fig. 14

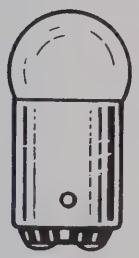


Fig. 15

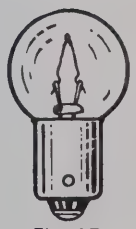


Fig. 17

Fig. 18

Line No.	Lamp No.	Primary Application	Design Volts	Design Amps or Watts	Candle Power
G-6 BULB ¾ IN. (19mm) DIAMETER[2]					
12-1	153	Medical, American Optical #16. L.C.L. 26mm [8]	5.8	1.10A	7.9 [2]
-2	157	Medical, L.C.L. measured to top of filament [8]	5.8	1.10A	8.1 [2]
-3	81	Auto, Aircraft and Coin Machine	6.5	1.02A	6
-4	82	Auto and Marine	6.5	1.02A	6
-5	82AF	Auto and Marine—Outside frosted (Spray method)	6.5	1.02A	—
-6	1314X	Indicator, High dielectric base insulation	6.5	1.02A	6 [2]
-7	63	Auto, Aircraft and Coin Machine	7.0	.63A	3
-8	64	Auto, Aircraft and Marine	7.0	.63A	3
-10	63K	Indicator [72]	7.0	.63A	3
-12	1471	Indicator [72]	12	.26A	2.3 [2]
-13	89K	Indicator [72]	13	.53A	6
-14	89	Auto	13	.58A	6
-15	90	Auto and Marine	13	.58A	6
-16	67K	Indicator [72]	13.5	.41A	4
-17	68	Auto and Marine	13.5	.59A	4
-18	1155	Auto, Truck marker. Heavy duty	13.5	.59A	4
-19	1232	Indicator. Heavy duty	13.5	.59A	4
-20	67	Auto	13.5	.59A	4
-21	97	Auto, Heavy duty	13.5	.69A	4
-22	97A	Auto, Sidemarker—Outside translucent amber coating. Heavy duty	13.5	.69A	—
-23	97NA	Auto, Sidemarker, Natural amber. Heavy duty	13.5	.69A	—
-24	1178	Auto, Heavy duty	13.5	.69A	4
-26	1247	Auto, Two identical filaments in series	14	.48	3
-27	631	Auto, Two identical filaments in series. Heavy duty	14	.63A	6
-30	72	Special Service	22	.18A	3
-31	509K	Indicator [72]	24	.18A	2.8 [2]
-33	1251	Auto, Two identical supported filaments in series	28	.23A	3
-34	1251CB	Auto, Outside ceramic blue coating	28	.23A	—
-36	1252	Auto, Two identical supported filaments in series	28	.23A	3
-37	303	Aircraft	28	.30A	6
-38	304	Aircraft	28	.30A	6

[2] Approximate. [8] Bulb top selected for minimum glass imperfections.
[61] Consult nearest Sales Office for application information.
[72] This is a low voltage lamp and is not for use in ordinary household circuits. The bulb may shatter if used in circuits of 110-120 volts or higher.

PHYSICAL SPECIFICATIONS

Base	B Vacuum C Gas Filled	Filament Designation	Light Center Length (Inches)	Max. Overall Length (Inches)	Rated Average Life (Hours)	Fig. No.	Line No.
Miniature Screw	C	C-2R	—	1 7/32	50	22	12-1
Miniature Screw	C	C-2R	1	1 7/32	50	22	-2
S. C. Bayonet	C	C-2R	3/4	1 7/16	500	23	-3
D. C. Bayonet	C	C-2R	3/4	1 7/16	500	20	-4
D. C. Bayonet	C	C-2R	—	1 7/16	500	20	-5
D. C. Bayonet	C	C-2R	3/4	1 7/16	500	20	-6
S. C. Bayonet	C	C-2R	3/4	1 7/16	1000	23	-7
D. C. Bayonet	C	C-2R	3/4	1 7/16	1000	20	-8
Candelabra Screw	C	C-2R	15/16	1 3/8	1000	24	-10
Candelabra Screw	B	C-2V [13]	15/16	1 3/8	250	22	-12
Candelabra Screw	C	C-2R	15/16	1 3/8	750	24	-13
S. C. Bayonet	C	C-2R	3/4	1 7/16	750	23	-14
D. C. Bayonet	C	C-2R	3/4	1 7/16	750	20	-15
Candelabra Screw	C	C-2R	1	1 3/8	1500	24	-16
D. C. Bayonet	C	C-2R	13/16	1 7/16	5000	20	-17
S. C. Bayonet	C	2C-2R	13/16	1 7/16	5000	23	-18
D. C. Bayonet	C	2C-2R	13/16	1 7/16	5000	20	-19
S. C. Bayonet	C	C-2R	13/16	1 7/16	5000	23	-20
S. C. Bayonet	C	C-2V [13]	13/16	1 7/16	5000	23	-21
S. C. Bayonet	C	C-2V [13]	—	1 7/16	5000	23	-22
S. C. Bayonet	C	C-2V [13]	—	1 7/16	5000	23	-23
D. C. Bayonet	C	C-2V [13]	13/16	1 7/16	5000	20	-24
S. C. Bayonet	C	2C-2R	3/4	1 7/16	2000	23	-26
S. C. Bayonet	C	2C-2R	3/4	1 7/16	1000	23	-27
D. C. Bayonet	B	C-2V [13]	3/4	1 7/16	200	20	-30
Candelabra Screw	B	C-2F	15/16	1 3/8	1000	24	-31
S. C. Bayonet	B	2C-2V [13]	3/4	1 7/16	2000	23	-33
S. C. Bayonet	B	2C-2V [13]	—	1 7/16	2000	23	-34
D. C. Bayonet	B	2C-2V [13]	3/4	1 7/16	2000	20	-36
S. C. Bayonet	B	C-2F	3/4	1 7/16	500	23	-37
D. C. Bayonet	B	C-2F	3/4	1 7/16	500	20	-38

[13] Supported.

LAMPS SHOWN ACTUAL SIZE

Fig. 20

Fig. 22

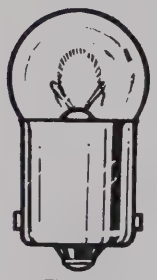


Fig. 23

Fig. 24

(G-6 BULB CONT.)

Line No.	Lamp No.	Primary Application	Design Volts	Design Amps or Watts	Candle Power
14-1	623	Auto, Two identical supported filaments in series	28	.37A	6
-3	624	Marine, Two identical supported filaments in series	28	.37A	6
-4	1224K	Indicator [72]	32	.16A	4 [2]
-6	1224	Marine	34	.16A	3.8 [2]
G-8 BULB 1 IN. (25mm) DIAMETER[2]					
-9	809M	Instrument [61,16]	70	8W	—
G-10 BULB 1¼ IN. (32mm) DIAMETER[2]					
-15	847	Aircraft, Gunsight (Bulb reflectorized—clear window)	12.5	2.0A 2.0A	—
G-16½ BULB 2 2/16 IN. (52mm) DIAMETER[2] Burning Position — Base down to horiz. except as noted.[73]					
-18	958	Searchlight. Burning position—any	5.5 6.0	2.0A 0.82A	14 [2] 5 [2]
-21	1019	Searchlight	12.8	4.75A	100
-23	1240	Special Service	32	3.6A	250 [2]

[2] Approximate. [61] Consult nearest Sales Office for application information.
[16] Voltage high for base size.
[73] Caution Note: while these lamps are carefully inspected before shipment, the glass bulb may crack when subjected to abnormal pressure. Therefore, it is recommended that the bulb be grasped with a cloth or glove when removing or installing the lamp in a tight fitting socket.

PHYSICAL SPECIFICATIONS

Base	B Vacuum C Gas Filled	Filament Designation	Light Center Length (Inches)	Max. Overall Length (Inches)	Rated Average Life (Hours)	Fig. No.	Line No.
S. C. Bayonet	B	2C-2V [13]	3/4	1 7/16	1000	23	14-1
D. C. Bayonet	B	2C-2V [13]	3/4	1 7/16	1000	20	-3
Candelabra Screw	B	C-2F	7/8	1 3/8	200	24	-4
D. C. Bayonet	B	C-2F	1 1/16	1 7/16	275	20	-6
Miniature Screw	B	C-7A	1 1/8	1 3/4	600	—	-9
D. C. Bayonet	C	C-6	—	2 1/16	300	28	-15
		C-8			300		
D. C. Bayonet	C	C-8Z	1 1/4	3	50	31	-18
		C-12			100		
S. C. Bayonet	C	C-2V	1 1/4	3	100	30	-21
D. C. Pf. (A)	C	CC-6	1 1/8	3	35	32	-23

[13] Supported.

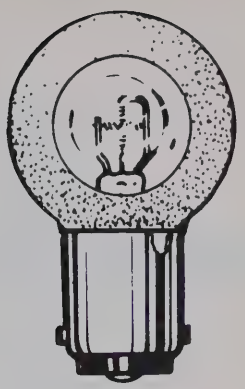


Fig. 28
(ACTUAL SIZE)

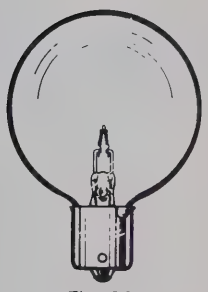


Fig. 30
(½ SIZE)

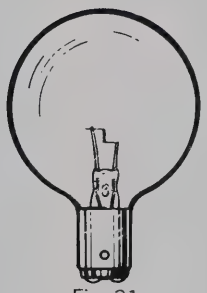


Fig. 31
(½ SIZE)

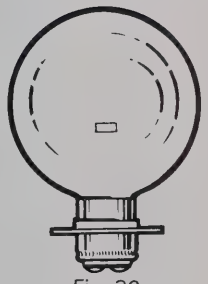


Fig. 32
(½ SIZE)

ELECTRICAL SPECIFICATIONS

Line No.	Lamp No.	Primary Application	Design Volts	Design Amps or Watts	Candle Power
R-12 BULB 1½ IN. (38mm) DIAMETER[2]					
16-1	1384	Aircraft, Base half of bulb reflectorized [21]	6	20W	—
-2	1383	Auto Reading light. Base half of bulb reflectorized [21]	13	20W	—
-3	1388	Special Service. Telephone trouble. Base half of bulb reflectorized [21]	24	20W	—
-4	1380	Aircraft, Gunsight. Base half of bulb reflectorized. Burn—B.D. to Horiz.	28	1.35A 1.35A	—
-5	1385	Special Service, Reading light. Base half of bulb reflectorized [21]	28	20W	—
-6	1385X	Special Service. Base half of bulb reflectorized—top clear	28	20W	—
RP-11 BULB 1⅜ IN. (35mm) DIAMETER[2] Burning Position — Base down to horiz. except as noted.[73]					
-8	1021	Hand Lantern, 4 No. 6 cells. Burning position—any	4.5	1.25A	5.7 [2]
-9	1184	Searchlight	5.5	6.25A	50
-10	1183	Auto Spotlamp	5.5	6.25A	50
-11	2331	Auto Headlamp	5.9 6.2	4.66A 4.49A	32 32
-12	2338	Instrument—High temperature solder	5.9 6.2	4.66A 4.49A	32 32
-13	1501	Auto	5.9	6.36	50
-13a	2530	Auto Headlamp	5.9 6.2	6.53 4.23	50 32
-14	1503	Auto and Aircraft	5.9	6.53A	50
-15	1025	Searchlight, 6 No. 6 cells or 24 F cells in series parallel	6.0	2.35	19 [2]
-20	1209	Auto	6.1	4.1A	32
-22	1133	Auto	6.2	3.91A	32
-23	1134	Auto	6.2	3.91A	32
-24	1621	Instrument, Oscillograph	6.2	3.91A	—
-25	1321	Auto	6.2	4.10A	32
-26	1323	Auto, Fog—Spotlamp	6.2	4.13A	32
-27	1325	Special Service. Photoelectric Scanner; Silver Contact	6.2	4.13A	32 [2]
-28	1105	Auto and Aircraft	6.2	5.72	50
-29	2330	Auto Headlamp	6.2 6.2	4.23 4.23	32 32
-30	1143	Auto	12.5	1.98A	32
-31	1144	Auto	12.5	1.98A	32
-32	1195	Auto, Nickel-plated base	12.5	3.00A	50
-33	1196	Auto	12.5	3.00A	50
-34	1293	Auto	12.5	3.00A	50
-35	1327	Auto. Fog—Spotlamp	12.8	2.08A	32

[2] Approximate. [21] Top of Bulb Light Outside Frosted.
[61] Consult nearest Sales Office for application information.
[73] Caution Note: While these lamps are carefully inspected before shipment, the glass bulb may crack when subjected to abnormal pressure. Therefore, it is recommended that the bulb be grasped with a cloth or glove when removing or installing the lamp in a tight fitting socket.

PHYSICAL SPECIFICATIONS

Base	B Vacuum C Gas Filled	Filament Designation	Light Center Length (Inches)	Max. Overall Length (Inches)	Rated Average Life (Hours)	Fig. No.	Line No.
S. C. Bayonet	C	C-8	—	2⅝	300	34	16-1
S. C. Bayonet	C	C-8	—	2⅝	300	34	-2
D. C. Bayonet	C	CC-8	—	2⅝	500	—	-3
D. C. Bayonet	C	CC-2V [13] / CC-2V [13]	—	2 5/16	100 / 100	—	-4
S. C. Bayonet	C	CC-8	—	2⅝	300	34	-5
S. C. Bayonet	C	CC-8	—	2⅝	300	34	-6
S. C. Pf. (B)	C	C-6	⅞	2¼	75	35	-8
D. C. Bayonet	C	C-2V	1¼	2¼	100	37	-9
S. C. Bayonet	C	C-2V	1¼	2¼	100	38	-10
D. C. Pf. (S)	C	C-6 / C-6	1.176	2¼	400 / 400	36	-11
D. C. Pf. (S)	C	C-6 / C-6	1.176	2¼	400 / 400	36	-12
S. C. Pf. (B)	C	C-6	⅞	2¼	200	35	-13
D. C. Pf. (A)	C	C-2V / C-2V	1⅛	2¼	200 / 200	36	-13a
S. C. Pf. (B)	C	C-2V	⅞	2¼	200	35	-14
S. C. Pf. (B)	C	C-6	⅞	2¼	75	35	-15
S. C. Pf. (B)	C	C-6	⅞	2¼	125	35	-20
S. C. Bayonet	C	C-2R	1¼	2¼	200	38	-22
D. C. Bayonet	C	C-2R	1¼	2¼	200	37	-23
S. C. Bayonet	C	C-2V	1¼	2¼	200	38	-24
S. C. Pf. (B)	C	C-6	⅞	2¼	200	35	-25
S. C. Pf. (B)	C	C-2V	⅞	2¼	200	35	-26
S. C. Pf. (B)	C	C-2V	⅞	2¼	200	35	-27
S. C. Bayonet	C	C-2V	1¼	2¼	125	38	-28
D. C. Pf. (A)	C	C-2V / C-2V	1⅛	2¼	200 / 200	36	-29
S. C. Bayonet	C	C-2R	1¼	2¼	400	38	-30
D. C. Bayonet	C	C-2R	1¼	2¼	400	37	-31
S. C. Bayonet	C	C-2V [13]	1¼	2¼	300	38	-32
D. C. Bayonet	C	C-2V [13]	1¼	2¼	300	37	-33
S. C. Bayonet	C	C-2R	1¼	2¼	300	38	-34
S. C. Pf. (B)	C	C-2V [13]	⅞	2¼	300	35	-35

[13] Supported.

Fig. 34
(½ SIZE)

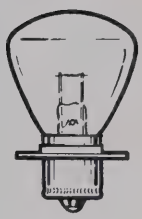


Fig. 35
(½ SIZE)

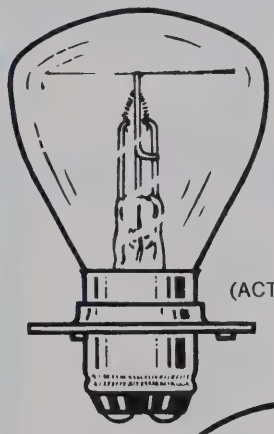


Fig. 36
(ACTUAL SIZE)

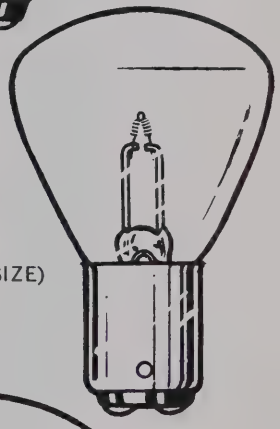


Fig. 37
(ACTUAL SIZE)

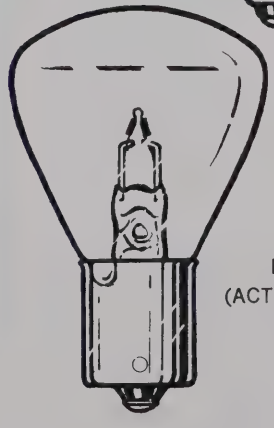


Fig. 38
(ACTUAL SIZE)

(RP-11 BULB CONT.)

Line No.	Lamp No.	Primary Application	Design Volts	Design Amps or Watts	Candle Power
18-1	1507	Auto	12.5	3.00A	50
-4	1047	Aircraft	26.0	2.70A	105 [2]
-5	1048X	Aircraft [14]	28.0 28.0	2.34A .52A	85 10 [2]
-7	1054	Marine	32	.74A	32
-7a	1056	Marine	32	1.15A	50
-8b	1062	Special Service. Emergency Lighting	40	.92A	50 [2]
-9	1150	Auto. Burning position—any	44	.47A	21
S-6 BULB ¾ IN. (19mm) DIAMETER [2]					
-9b	2276	Special Service. Photoelectric scanner. Silver Contact	3.5	2.5A	6.5 [2]
-10	1424	Instrument. Photocell Exciter. Silver contact	3.7	2.75A	11 [2]
-10a	1171	Special Service	12.8	1.35A	21 [2]
S-8 BULB 1 IN. (25mm) DIAMETER [2]					
-12	1459	Hand Lantern, 4V storage battery	4.0	.80A	2.5 [2]
-13	1584	Hand Lantern, 4V storage battery	4.0	2.0A	8.8 [2]
-16	1651	Hand Lantern, 4F or 8F cells in series parallel	5.0	.60A	3 [2]
-16a	1651IF	Hand Lantern, 4F or 8F cells in series parallel, Inside Frosted	5.0	.60A	3 [2]
-17	1565	Instrument, Photoelectric scanner [7]	5.1	1.75A	4.8
-18	1612	Instrument, L.C.L. & A.A. tol. ± 3/64" [7]	5.4	1.90	10 [2]
-19	1613	Instrument, Oscillograph [7]	6.0	1.5A	13 [2]
-21	1680	Aircraft	6.0	4.10A	32
-22	1680X	Aircraft, Silver Contact	6.0	4.10A	32
-23	1680IF	Aircraft, Inside Frosted	6.0	4.10A	32
-24	1096	Instrument, Microscope Illuminator [7]	6.0	4.5A	30 [2]
-25	1468	Medical Instrument. Burning position—Base up to horizontal [7]	6.0	4.5A	30 [2]
-26	1594	Instrument, Microscope illuminator. Burn. pos.—Base down to horizontal [7]	6.0	5.0A	36 [2]
-27	1615	Instrument, Microscope illuminator. Burn—B.D. to horizontal [7]	6.0	5.0A	36 [2]

[2] Approximate. [7] Entire bulb selected for minimum glass imperfections. [14] Excessive wattage for bulb.
[61] Consult nearest Sales Office for application information.

PHYSICAL SPECIFICATIONS

Base	B Vacuum C Gas Filled	Filament Designation	Light Center Length (Inches)	Max. Overall Length (Inches)	Rated Average Life (Hours)	Fig. No.	Line No.
S. C. Pf. (B)	C	C-2V [13]	7/8	2 1/4	300	35	18-1
S. C. Bayonet	C	2CC-6	1 1/4	2 1/4	25	38	-4
		2CC-6			125		
D. C. Index	C	C-2V [13]	1 1/4	2 1/4	300	40	-5
D. C. Bayonet	C	C-2V [13]	1 1/4	2 1/4	100	37	-7
D. C. Bayonet	C	C-5	1 1/4	2 1/4	100	37	-7a
D. C. Bayonet	C	C-5	1 1/4	2 1/4	100	37	-8b
D. C. Bayonet	C	C-13	1 1/4	2 1/4	150	37	-9
S. C. Bay.	C	C-6	1 1/8	1 13/16	2000	39	-9b
S. C. Bay.	C	C-6	1 1/8	1 13/16	100	39	-10
D. C. Bay.	C	CC-6	1 1/8	1 13/16	500	39a	-10a
S. C. Bayonet	C	C-2R	1 1/8	2	300	43	-12
D. C. Bayonet	C	C-2R	1 1/8	2	100	41	-13
S. C. Bayonet	C	C-2R	1 1/8	2	20	43	-16
S. C. Bayonet	C	C-6	—	2	20	43	-16a
S. C. Pf. (A)	C	C-8 I	1	2	5000+	42	-17
D. C. Bayonet	C	C-6	1 1/4	2	1000	41	-18
S. C. Bayonet	C	C-6	1 1/4	2	50	43	-19
S. C. Bayonet	C	C-6	1 1/4	2	300	43	-21
S. C. Bayonet	C	C-6	1 1/4	2	300	43	-22
S. C. Bayonet	C	C-6	—	2	300	43	-23
D. C. Pf. (S)	C	Hor. C-2R	1	2	500	45	-24
D. C. Pf. (S)	C	C-2R	1 1/4	2	500	45	-25
D. C. Bayonet	C	C-6	1 1/4	2	250	41	-26
S. C. Pf. (B)	C	C-6	7/8	2	250	42	-27

[13] Supported.

LAMPS SHOWN ACTUAL SIZE

Fig. 39

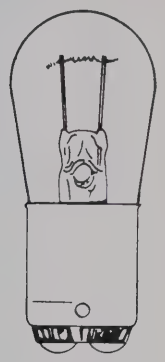


Fig. 39a

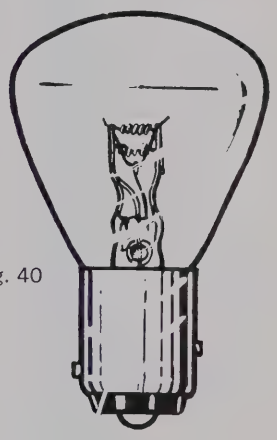


Fig. 40

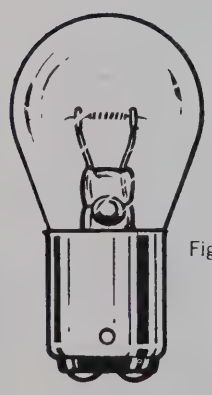


Fig. 41

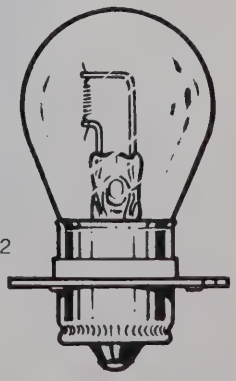


Fig. 42

(S-8 BULB CONT.)

Line No.	Lamp No.	Primary Application	Design Volts	Design Amps or Watts	Candle Power
20-1	1129	Auto	6.4	2.63A	21
-2	1130	Auto	6.4	2.63A	21
-4	1154	Auto Stop, Tail, Signal	6.4 7.0	2.63A .75A	21 3
-5	1605	Special Service. Facsimile Recorder	6.4	2.69	21 [2]
-6	1606	Special Service. Foul Line Detector	6.4	2.69	21 [2]
-8	1608	Special Service, Photoelectric scanner. Silver contacts	6.4	2.69A	21 [2]
-9	1626	Special Service, Sewing Machine	6.4	3.00A	23 [2]
-10	6	Special Service, Sewing Machine	6.4	3.0A	23 [2]
-11	6 IF	Special Service, Sewing Machine (Inside frosted)	6.4	3.0A	23 [2]
-12	6X	Special Service, Sewing Machine, Raised brass contacts	6.4	3.0A	23 [2]
-13	1460	Medical [7]	6.5	2.75A	23 [2]
-14	1460X	Microscope Illuminator. Silver contacts [7]	6.5	2.75A	23 [2]
-15	1493	Instrument, Microscope illuminator [7]	6.5	2.75A	23 [2]
-16	1497	Instrument, Microscope illuminator [7] L.C.L. & A.A. tol. ± 1/32"	6.5	2.75A	23 [2]
-17	2030	Instrument [7]	6.5	2.75A	18 [2]
-18	1630	Instrument, Microscope illuminator [7]	6.5	2.75A	23 [2]
-19	1631X	Instrument, Colorimeter, Silver contacts [7]	6.5	2.75A	23 [2]
-20	1649	Instrument, Microscope illuminator, Rect. shaped filament [8]	6.5	2.75A	23 [2]
-22	1619	Instrument [7]	6.7	1.90A	15
-24	87	Auto	6.8	1.91A	15
-25	88	Auto and Marine	6.8	1.91A	15
-26	8	Special Service, Sewing Machine	8.0	2.20A	20 [2]
-28	1295	Auto. Burn Base Down to Horizontal [61,14]	12.5	3.00A	50
-29	93	Auto	12.8	1.04A	15
-31	94	Auto and Marine	12.8	1.04A	15
-33	1152	Special Service [7]	12.8	1.34A	21 [2]
-34	1016	Auto Stop, Tail Signal	12.8 14.0	1.34A .59A	21 6
-35	1176	Auto Stop, Tail Signal	12.8 14.0	1.34A .59A	21 6
-36	1161	Signal	12.8	1.35A	22 [2]
-37	1141	Auto	12.8	1.44A	21
-38	1141 IF	Auto interior. Inside frosted	12.8	1.44A	
-39	1142	Auto	12.8	1.44A	21
-39a	1035	Snowmobile, Stop and Tail Light	12.8 14.0	1.44A .59A	21 3
-40	1777	Aircraft Tail Light	12.8	1.52A	26 [2]
-41	1034	Auto Stop, Tail Signal	12.8 14.0	1.80A .59A	32 3
-42	1034A	Auto Signal, Park. Outside translucent amber coating	12.8 14.0	1.80A .59A	— —
-43	1034NA	Auto Signal, Park. Natural Amber	12.8 14.0	1.80A .59A	— —
-45	1073	Auto Signal	12.8	1.80A	32
-46	1076	Auto	12.8	1.80A	32
-48	1157	Auto, Truck stop signal. Heavy duty	12.8 14.0	2.10A .59A	32 3
-49	1157A	Auto Signal, Park. Outside translucent amber coating. Heavy duty	12.8 14.0	2.10A .59A	—

[2] Approximate. [7] Entire bulb selected for minimum glass imperfections. [14] Excessive wattage for bulb.
[8] Bulb top selected for minimum glass imperfections.
[61] Consult nearest Sales Office for application information.

PHYSICAL SPECIFICATIONS

Base	B Vacuum C Gas Filled	Filament Designation	Light Center Length (Inches)	Max. Overall Length (Inches)	Rated Average Life (Hours)	Fig. No.	Line No.
S. C. Bayonet	C	C-6	1¼	2	200	43	20-1
D. C. Bayonet	C	C-6	1¼	2	200	41	-2
D. C. Index	C	C-6 C-6	1¼	2	200 1000	44	-4
S. C. Bayonet	C	C-2V	1¼	2	200	43	-5
D. C. Index	C	C-6	1¼	2	200	41	-6
D. C. Bayonet	C	C-2V	1¼	2	200	41	-8
D. C. Index	C	C-2R	1¼	2	500	44	-9
D. C. Bayonet	C	C-2R	1¼	2	500	41	-10
D. C. Bayonet	C	C-2R	—	2	500	1	-11
Special D. C. Bayonet	C	C-2R	1¼	2	500	—	-12
D. C. Pf. (A)	C	C-6	1¼	2	100	45	-13
D. C. Pf. (A)	C	C-6	1¼	2	100	45	-14
D. C. Bayonet	C	C-6	1⅛	2	100	41	-15
D. C. Bayonet	C	C-6	1⅛	2	100	41	-16
D. C. Pf. (A)	C	C-6	1	2	500	45	-17
D. C. Pf. (A)	C	C-6	1	2	100	45	-18
D. C. Pf. (A)	C	C-6	1	2	100	45	-19
D. C. Pf. (A)	C	FC-6Z	1¼	2	100	45	-20
S. C. Bayonet	C	C-6	1⅛	2	500	43	-22
S. C. Bayonet	C	C-6	1⅛	2	300	43	-24
D. C. Bayonet	C	C-6	1⅛	2	300	41	-25
D. C. Bayonet	C	C-2R	1¼	2	500	41	-26
S. C. Bayonet	C	C-2R	1¼	2	300	43	-28
S. C. Bayonet	C	C-6	1⅛	2	700	43	-29
D. C. Bayonet	C	C-6	1⅛	2	700	41	-31
D. C. Bayonet	C	C-2R	1¼	2	500	41	-33
D. C. Index	C	C-6 C-6	1¼	2	300 1500	44	-34
D. C. Bayonet	C	C-6 C-6	1¼	2	300 1500	41	-35
S. C. Bayonet	C	CC-6	1¼	2	500	43	-36
S. C. Bayonet	C	C-6	1¼	2	1000	43	-37
S. C. Bayonet	C	C-6	—	2	1000	43	-38
D. C. Bayonet	C	C-6	1¼	2	1000	41	-39
D. C. Index	C	C-6 C-6	1¼	2	1000 5000	44	-39a
S. C. Bayonet	C	C-2R	1⅛	2	400	43	-40
D. C. Index	C	C-6 C-6	1¼	2	200 5000	44	-41
D. C. Index	C	C-6 C-6	—	2	200 5000	44	-42
D. C. Index	C	C-6 C-6	—	2	200 5000	44	-43
S. C. Bayonet	C	C-6	1¼	2	200	43	-45
D. C. Bayonet	C	C-6	1¼	2	200	41	-46
D. C. Index	C	C-6 C-6	1¼	2	1200 5000	44	-48
D. C. Index	C	C-6 C-6	—	2	1200 5000	44	-49

[37] 200 hours at 14 volts.

LAMPS SHOWN ACTUAL SIZE

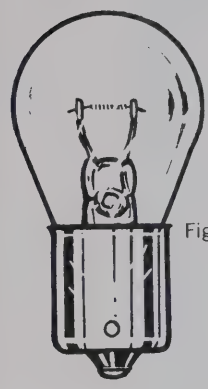


Fig. 43

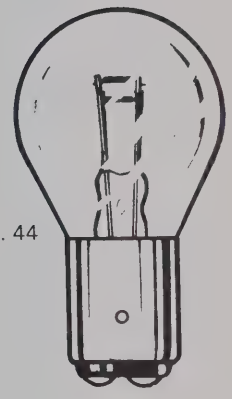


Fig. 44

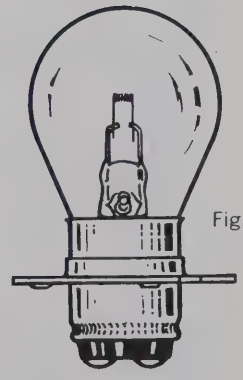


Fig. 45

(S-8 BULB CONT.)

Line No.	Lamp No.	Primary Application	Design Volts	Design Amps or Watts	Candle Power
22-1	1157NA	Auto Signal, Park. Natural amber. Heavy duty	{12.8 14.0	2.10A .59A	—
-4	1156	Auto, Truck signal. Heavy duty	12.8	2.10A	32
-4a	198	Truck. Stop-signal. Heavy duty	{12.8 14.0	2.25A .59A	32 3
-4b	199	Truck. Signal. Heavy duty	12.8	2.25A	32
-5	1095	Auto, Park	14.0	.51A	4
-6	93T	Special Service	15.5	1.12A	24 [2]
-7	1634	Instrument, Microscope illuminator, Burn Base Up to horizontal [8]	20.0	1.0A	24 [2]
-8	305	Aircraft	28.0	.51A	15
-9	305IF	Aircraft, Inside frosted	28.0	.51A	15
-10	306	Aircraft	28.0	.51A	15
-10a	1591	Auto [75]	28.0	.61A	15
-10b	1591IF	Aircraft, Inside frosted [75]	28.0	.61A	15
-11	1691	Auto—2 Identical filaments in series	28.0	.61A	15
-12	1691IF	Aircraft, Inside frosted—2 identical filaments in series	28.0	.61A	15
-13	1692	Marine—2 identical filaments in series	28.0	.61A	15
-14	2232	Aircraft. Spiral lead	28.0	.643A	17
-15	307	Aircraft	28.0	.67A	21
-16	307IF	Aircraft, Inside frosted	28.0	.67A	21
-17	308	Aircraft	28.0	.67A	21
-18	308IF	Aircraft, Inside frosted	28.0	.67A	21
-20	307R	Aircraft, Outside coated red. (Silicate)	28.0	.67A	—
-21	307SB	Aircraft, Reflectorized bowl	28.0	.67A	—
-24	1203	Auto	28.0	.71A	21
-25	1204	Auto	28.0	.71A	21
-27	2233	Aircraft. Spiral lead	28.0	.766A	21
-27a	1563	Auto. Military headlamp (Blackout)	28	.76A	21
-28	1665	Aircraft	28.0	.80A	21
-29	1665IF	Aircraft, Inside frosted	28.0	.80A	21
-30	1665SB	Aircraft, Reflectorized bowl	28.0	.80A	21
-30a	315	Aircraft, (+)	28.0	.90	32C
-32	1662	Aircraft, C-2V filament inverted. Burn—B.D. to horizontal [15]	28.0	{.93A .34A	32 6
-34	1683	Auto and Aircraft—2 identical filaments in series	28.0	1.02A	32
-35	1638	Marine—2 identical filaments in series	28.0	1.02A	32
-37	1228	Marine	34.0	.45A	15 [2]
-38	1229	Special Service. Emergency Lighting	40.0	.38A	15 [2]

[2] Approximate. [15] Limited mechanical strength. [8] Bulb top selected for minimum glass imperfections.
[75] Estimated life based on limited test information.

PHYSICAL SPECIFICATIONS

LAMPS SHOWN ACTUAL SIZE

Base	B Vacuum C Gas Filled	Filament Designation	Light Center Length (Inches)	Max. Overall Length (Inches)	Rated Average Life (Hours)	Fig. No.	Line No.
D. C. Index	C	C-6 C-6	—	2	1200 5000	44	22-1
S. C. Bayonet	C	C-6	1¼	2	1200	43	-4
D. C. Index	C	C-6 C-6	1¼	2	1200 5000	44	-4a
S. C. Bayonet	C	C-6	1¼	2	1200	43	-4b
S. C. Bayonet	C	C-6	1¼	2	5000	43	-5
S. C. Bayonet	C	C-6	1⅛	2	150	43	-6
D. C. Pf. (A)	C	CC-6	1¼	2	200	45	-7
S. C. Bayonet	C	C-2V [13]	1⅛	2	300	43	-8
S. C. Bayonet	C	C-2V [13]	—	2	300	43	-9
D. C. Bayonet	C	C-2V [13]	1⅛	2	300	41	-10
S. C. Bayonet	C	C-2V [13]	1⅛	2	1000	43	-10a
S. C. Bayonet	C	C-2V [13]	—	2	1000	43	-10b
S. C. Bayonet	C	2C-2R	1⅛	2	1000	43	-11
S. C. Bayonet	C	2C-2R	—	2	1000	43	-12
D. C. Bayonet	C	2C-2R	1⅛	2	1000	41	-13
S. C. Bayonet	C	CC-8	1 3/16	2	2000	43	-14
S. C. Bayonet	C	C-2V [13]	1⅛	2	300	43	-15
S. C. Bayonet	C	C-2V [13]	—	2	300	43	-16
D. C. Bayonet	C	C-2V [13]	1⅛	2	300	41	-17
D. C. Bayonet	C	C-2V [13]	—	2	300	41	-18
S. C. Bayonet	C	C-2V [13]	—	2	300	43	-20
S. C. Bayonet	C	C-2V [13]	1⅛	2	300	43	-21
S. C. Bayonet	C	C-2V [13]	1¼	2	400	43	-24
D. C. Bayonet	C	C-2V [13]	1¼	2	400	41	-25
S. C. Bayonet	C	CC-8	1 3/16	2	2000	43	-27
S. C. Bayonet	C	CC-6	1⅛	2	1000	43	-27a
S. C. Bayonet	C	C-2V [13]	1⅛	2	1000	43	-28
S. C. Bayonet	C	C-2V [13]	—	2	1000	43	-29
S. C. Bayonet	C	C-2V [13]	1⅛	2	1000	43	-30
S. C. Bayonet	C	C-2V [13]	1⅛	2	300	43	-30a
D. C. Index	C	CC-6 C-2V [13]	1¼	2	400 1000	44	-32
S. C. Bayonet	C	2C-6	1¼	2	500	43	-34
D. C. Bayonet	C	2C-6	1¼	2	500	41	-35
D. C. Bayonet	C	C-2V [13]	1⅛	2	275	41	-37
D. C. Bayonet	C	C-2V [13]	1⅛	2	400	41	-38

[13] Supported. [37] 200 hours at 14 volts.

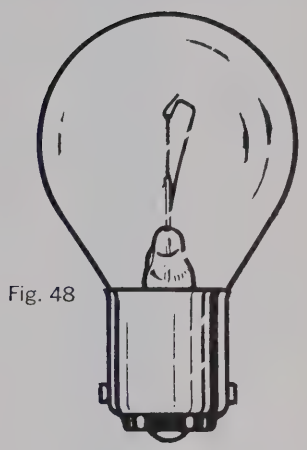


Fig. 48

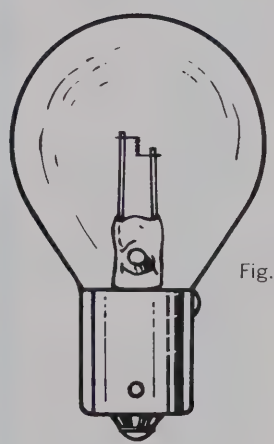


Fig. 49

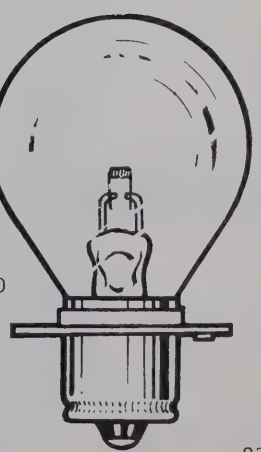


Fig. 50

Line No.	Lamp No.	Primary Application	Design Volts	Design Amps or Watts	Candle Power
S-11 BULB. 1⅜ IN. (35mm) DIAMETER[2]					
24-3	1759	Instrument, Colorimeter [7]	6.1	4.1A	32 [2]
-4	1763	Instrument, Colorimeter [7]	6.1	4.1A	32 [2]
-5	1723	Indicator, Base down to horizontal	6.2	4.5A	32 [2]
-6	1724	Indicator, Base down to horizontal	6.2	4.5A	32 [2]
-7	1561	Instrument, Colorimeter [7]	6.3	4.0A	24 [2]
-8	1731	Instrument, Silver Contact, Burn Base Down to horizontal [7]	6.3	6.6A	47 [2]
-9	1726	Aircraft, Gunsight (Bulb reflectorized)	12.5	3.0A	—
-10	1726X	Aircraft. Gunsight (Bulb reflectorized) 1/32" clear spot on back	12.5	3.0A	—
-11	309	Aircraft	28	.9A	32
-12	309IF	Aircraft, Inside frosted	28	.9A	32
-13	310	Aircraft	28.0	.9A	32
-15	311	Aircraft	28	1.29A	50
-17	311R	Aircraft, Outside coated red (Silicate)	28	1.29A	—
-17a	312	Aircraft	28	1.29A	50
-18	3011	Aircraft	28	1.29A	44 [2]
T-3 BULB ⅜ IN. (9.5mm) DIAMETER[2]					
-19	1985	Instrument. Quartz bulb [11]. Halogen Cycle	6	2.67	18 [2]
-20	1974	Instrument. Quartz bulb [11]. Halogen Cycle	6	20W	10 [2]
-21	1977	Special Service. Quartz Bulb [11]. Halogen Cycle	8.5	7.3A/62W	80 [2]
-22	1962	Special Service, Quartz bulb [11]. Halogen Cycle	8.5	7.3A	80 [2]
-23	1962B	Special Service, Quartz bulb [11], insulated leads. Halogen Cycle	8.5	7.3A	80 [2]
-24	1978X	Aircraft, Navigator, Quartz bulb [11]. Halogen Cycle	10	10A/100W	130 [2]
-25	1988	Aircraft, Navigation, Quartz bulb [11]. Halogen Cycle	10	10A/100W	130 [2]
-26	1975	Aircraft. Gunsight Quartz bulb [11]. Halogen Cycle	12.8	1.95A/25W	25 [2]
-26a	211-2	Auto	12.8	.97A	12
-26b	561	Auto	12.8	.97A	12
-27	1979	Aircraft. Quartz bulb [11]. Halogen Cycle	13.0	5.77A/75W	90
-27a	1984	Aircraft. Quartz bulb [11]. Halogen Cycle	13.0	5.77A/75W	115 [2]
-27b	1976	Aircraft, Quartz bulb [11].	13	5.77A	115 [2]
-28	563	Auto	13.5	.50A	4
-28a	214-2	Auto	13.5	.50A	4
-28b	212-2	Auto	13.5	.74A	6
-28c	562	Auto	13.5	.74A	6
-29	1474	Indicator	14.0	.17A	1.7 [2]
-30	1476	Indicator	18	.17A	2.2 [2]
-30a	1477	Indicator	24	.17A	3.3 [2]
-31	1982	Aircraft, Navigation, Quartz bulb [11]. Halogen Cycle	28.0	2.68A/75W	—
-32	1968	Aircraft, Gunsight. Quartz bulb [11]. Halogen Cycle	28.0	.89/25W	15 [2]
-33	1967	Aircraft. Quartz bulb [11]. Halogen Cycle	28.0	5.36/150W	210 [2]
-34	1964	Aircraft. Quartz bulb [11]. Halogen Cycle	28.0	5.36/150W	230 [2]
-35	1970	Aircraft. Quartz bulb [11]. Halogen Cycle.	28.0	3.57/100W	150
T-3¼ BULB 13/32 IN. (10mm) DIAMETER[2]					
-36	48	Radio	2	.06A	.04 [2]
-37	49	Radio	2	.06A	.04 [2]
-39	1436	Indicator	2.5	.30A	.30 [2]
-40	41	Radio, Indicator	2.5	.50A	.50 [2]
-41	43	Indicator	2.5	.50A	.50 [2]

[2] Approximate. [7] Entire bulb selected for minimum glass imperfections.
[11] Use only where seal temperature does not exceed 350°C. Also a minimum bulb wall temperature of 250°C is necessary for halogen cycle operation.

PHYSICAL SPECIFICATIONS

Base	B Vacuum C Gas Filled	Filament Designation	Light Center Length (Inches)	Max. Overall Length (Inches)	Rated Average Life (Hours)	Fig. No.	Line No.
S. C. Pf. (B)	C	C-8Z	7/8	2 3/8	125	50	24-3
S. C. Pf. (B)	C	C-6	7/8	2 3/8	125	50	-4
S. C. Bayonet	C	C-6	1 1/4	2 3/8	400	49	-5
D. C. Bayonet	C	C-6	1 1/4	2 3/8	400	48	-6
S. C. Pf. (B)	C	C-8Z	7/8	2 3/8	1500	50	-7
S. C. Pf. (B)	C	C-6	7/8	2 3/8	1000	50	-8
D. C. Bayonet	C	3C-6	1 9/32	2 3/8	300	48	-9
D. C. Bayonet	C	3C-6	1 9/32	2 3/8	300	48	-10
S. C. Bayonet	C	C-2V [13]	1 1/4	2 3/8	300	49	-11
S. C. Bayonet	C	C-2V [13]	—	2 3/8	300	49	-12
D. C. Bayonet	C	C-2V [13]	1 1/4	2 3/8	300	48	-13
S. C. Bayonet	C	C-2V [13]	1 1/4	2 3/8	300	49	-15
S. C. Bayonet	C	C-2V [13]	—	2 3/8	300	49	-17
D. C. Bayonet	C	C-2V [13]	1 1/4	2 3/8	300	48	-17a
S. C. Bayonet	C	C-2V [13]	1 1/4	2 3/8	1000	49	-18
D. C. Bayonet	C	C-6	25/32	1 7/16	1000	—	-19
Wire Terminal	C	C-6	.285	1.136	10000+	51	-20
Double Slide	C	C-6	7/16	1.172	50	54	-21
Wire Terminal	C	C-6	.285	1.136	50	51	-22
Wire Terminal	C	C-6	.285	1.136	50	51	-23
Special	C	C-8	—	2.150	2000	52a	-24
Special, Wire Leads	C	C-8	—	2.150	2000	—	-25
Double Slide	C	C-6	1/2	1.172	500	54	-26
Miniature Cap	C	C-8	—	1.675	1000	53a	-26a
Flat Clip	C	C-8	—	1.72	1000	53b	-26b
Special Sleeve	C	C-8 [13]	—	2 1/4	300	53	-27
Wire Terminal	C	C-6	.281	1.3	400	51	-27a
Double Slide	C	C-6	.560	1.300	400	54	-27b
Flat Clip	C	C-8	—	1.72	2000	53b	-28
Miniature Cap	C	C-8	—	1.675	2000	53a	-28a
Miniature Cap	C	C-8	—	1.675	5000	53a	-28b
Flat Clip	C	C-8	—	1.72	5000	53b	-28c
Miniature Screw	B	C-2V [13]	13/16	1 1/4	250	52	-29
Miniature Screw	B	C-2V [13]	13/16	1 1/4	250	52	-30
Miniature Screw	B	C-2F	13/16	1 1/4	250	52	-30a
S. C. Bay.	C	CC-8	1 1/16	1 7/8	1000	—	-31
Double Slide	C	C-2V [13]	13/32	1.172	500	54	-32
Special Sleeve	C	CC-8 [13]	—	2 1/4	1000	53	-33
Special Sleeve	C	CC-8	—	2 1/4	1000	53	-34
Special Sleeve	C	CC-8	—	2 1/4	1000	53	-35
Miniature Screw	B	S-2	—	1 3/16	1000	55	-36
Miniature Bayonet	B	S-2	—	1 3/16	1000	56	-37
Miniature Bayonet	B	C-2R	5/8	1 3/16	1000	56	-39
Miniature Screw	B	C-2R	31/32	1 3/16	3000	55	-40
Miniature Bayonet	B	C-2R	25/32	1 3/16	3000	56	-41

[13] Supported.

LAMPS SHOWN ACTUAL SIZE

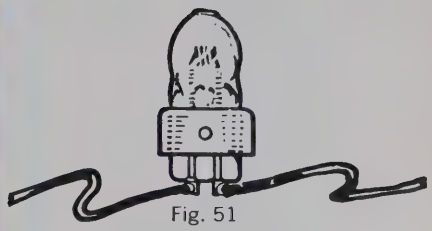


Fig. 51

Fig. 52

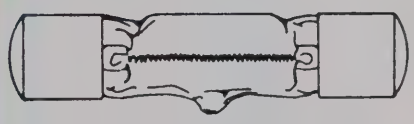


Fig. 52a

Fig. 53

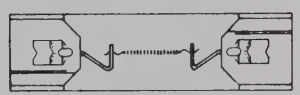


Fig. 53a

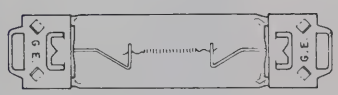


Fig. 53b

Fig. 54

(T-3¼ BULB CONT.)

Line No.	Lamp No.	Primary Application	Design Volts	Design Amps or Watts	Candle Power
26-1	1490	Radio	3.2	.16A	.20 [2]
-1a	1590U	Indicator. Approx. 7/16" leads [74]	3.2	.16A	.20 [2]
-2	42	Radio	3.2	.35A	.50 [2]
-3	45	Radio	3.2	.35A	.50 [2]
-4	1867	Signal	4	.06A	.06 [2]
-6	1804	Indicator	4	.06A	.07 [2]
-7	1906	Signal	5	.07A	.19 [2]
-8	1850	Signal [64]	5	.09A	.25 [2]
-9	1850W	Signal	5	.09A	.25 [2]
-11	316	Aircraft	6	.70A	3.4 [2]
-13	1302	Radio	6.3	.035-.050A	.08 [2]
-14	2189D	Indicator, Approx. 5/8" leads—down position [74]	6.3	.035-050A	.08 [2]
-15	755	Indicator	6.3	.15A	.33 [2]
-16	2157D	Indicator. Approx. ½" leads—down position [74]	6.3	.15A	.33 [2]
-17	159	Radio, TV, Indicator	6.3	.15A	.34 [2]
-19	1847	Radio, TV, Indicator	6.3	.15A	.38 [2]
-20a	2247U	Indicator. Approx. 7/16" leads [74]	6.3	.15A	.38 [2]
-21	40	Radio, Indicator	6.3	.15A	.52 [2]
-22	47	Radio, TV, Indicator	6.3	.15A	.52 [2]
-23	3147D	Indicator. Approx. 5/8" leads—down position [74]	6.3	.15A	.52 [2]
-25	1866	Radio	6.3	.25A	.65 [2]
-26	259	Radio, TV, Indicator	6.3	.25A	.65 [2]
-27	44	Indicator, Radio, TV	6.3	.25A	.90 [2]
-28	46	Radio, Indicator, TV	6.3	.25A	.90
-31	239	Radio [62,64]	6.3	.36A	.67 [2]
-32	240	Radio, TV. L.C.L. from top of fil. 5/8" ± .040". A.A. ± 3/32" [64]	6.3	.36A	.67 [2]
-33	1810	Special Service	6.3	.40A	1.5 [2]
-34	238	Indicator [62]	6.3	.50A	2
-35	147	Auto Indicator	7.0	.43A	2
-37	1888	Auto	7.0	.50A	2
-38	947	Signal	9.84	.50A	4.6 [2]
-39	1408	Signal	10	.13A	.85 [2]
-41	1816	Aircraft and Auto	13	.33A	3 [2]
-41a	558	Auto. Indicator [68]	13	.33A	—
-41b	192	Auto. Instrument—Indicator	13	.33A	3
-42	756	Indicator	14	.08A	.31 [2]
-43	658	Indicator	14	.08A	.31 [2]
-44	2159D	Indicator. Approx. ½" leads—down position [74]	14	.08A	.31 [2]

[2] Approximate. [14] Excessive wattage for bulb.
[61] Consult nearest Sales Office for application information.
[62] Tolerance for light center length ± 1/32" and axial alignment ± .050".
[64] Plane of filament within 30° of perpendicular to base pins.
[68] Uses lens-end TL-3¼ bulb. Provides 7000 to 11,000 footcandles in a ¼" diameter spot at ⅛" from end of bulb.
[74] This is a butt seal wire terminal lamp. The glass-to-metal seal and tip are fragile. Therefore, any bending of the wire terminals should not be closer to glass than ⅛" and soldering within ⅛" of glass seal should be avoided since the heat of the soldering can cause a leak in the seal.

PHYSICAL SPECIFICATIONS

LAMPS SHOWN ACTUAL SIZE

Base	B Vacuum C Gas Filled	Filament Designation	Light Center Length (Inches)	Max. Overall Length (Inches)	Rated Average Life (Hours)	Fig. No.	Line No.
Miniature Bayonet	B	C-2R	25/32	1 3/16	3000	56	26-1
Wire Terminal	B	C-2R	—	1.053	3000	57	-1a
Miniature Screw	B	C-2R	31/32	1 3/16	3000	55	-2
Miniature Bayonet	B	C-2R	25/32	1 3/16	3000	56	-3
Miniature Bayonet	B	C-6	3/4	1 3/16	2000	56	-4
Miniature Bayonet	B	S-2	—	1 3/16	1000	56	-6
Miniature Bayonet	B	C-6	5/8	1 3/16	1000	56	-7
Miniature Bayonet	B	C-2R	5/8	1 3/16	1500	56	-8
Miniature Bayonet	B	C-2R	5/8	1 3/16	1500	56	-9
Miniature Bayonet	C	C-2R	5/8	1 3/16	500	56	-11
Miniature Bayonet	B	C-6	3/4	1 3/16	5000	56	-13
Wire Terminal	B	C-6	—	1.053	5000	57	-14
Miniature Bayonet	B	C-2R	25/32	1 3/16	20000 [43]	56	-15
Wire Terminal	B	C-2R	—	1.053	20000 [43]	57	-16
Wedge	B	C-2R	1/2	1 1/16	5000+ [44]	58	-17
Miniature Bayonet	B	C-2R	25/32	1 3/16	5000+ [44]	56	-19
Wire Terminal	B	C-2R	—	1.053	5000+ [44]	57	-20a
Miniature Screw	B	C-2R	31/32	1 3/16	3000	55	-21
Miniature Bayonet	B	C-2R	25/32	1 3/16	3000	56	-22
Wire Terminal	B	C-2R	—	1.053	3000	57	-23
Miniature Bayonet	B	C-2R	25/32	1 3/16	5000+ [44]	56	-25
Wedge	B	C-2R	11/16	1 1/16	5000+ [44]	58	-26
Miniature Bayonet	B	C-2R	25/32	1 3/16	3000	56	-27
Miniature Screw	B	C-2R	31/32	1 3/16	3000	55	-28
Miniature Bayonet	C	C-2R	.600	1 3/16	5000+ [44]	56	-31
Miniature Bayonet	C	C-2R	—	1 3/16	5000+ [44]	56	-32
Miniature Bayonet	B	C-2R	23/32	1 1/8	3000	56	-33
Miniature Bayonet	C	C-2R	23/32	1 3/16	2000	56	-34
Wedge	B	C-2R	.562	1 1/16	1500	58	-35
Miniature Bayonet	B	C-2R	9/16	1 3/16	3000	56	-37
Miniature Bayonet	C	C-2R	1/2	1 3/16	200	56	-38
Miniature Bayonet	B	C-2V [13]	5/8	1 3/16	250	56	-39
Miniature Bayonet	B	C-2V [13]	5/8	1 3/16	1000	56	-41
Wedge	B	C-2V [13]	—	1 1/16	500	58	-41a
Wedge	B	C-2V [13]	.562	1 1/16	1000	58	-41b
Miniature Bayonet	B	C-2F	5/8	1 3/16	15000 [43]	56	-42
Wedge	B	C-2F	.562	1 1/16	15000 [43]	58	-43
Wire Terminal	B	C-2F	—	1.053	15000 [43]	57	-44

[13] Supported. [43] Design life is 50,000 hours. [44] At 6.6 volts.

Fig. 55

Fig. 56

Fig. 57

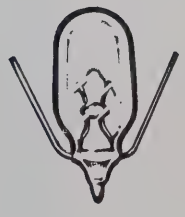


Fig. 58

(T-3¼ BULB CONT.)

Line No.	Lamp No.	Primary Application	Design Volts	Design Amps or Watts	Candle Power
28-1	1488	Indicator	14	.15A	1.5 [2]
-2	161	Auto, Instrument, Indicator. Heavy duty	14	.19A	1
-3	1487	Coin Machine	14	.20A	1.4 [2]
-4	1887U	Instrument, Photocell. Approx. ⅝" leads [74]	14	.20A	1.4 [2]
-5	1815	Indicator	14	.20A	1.4 [2]
-6	1891	Auto, Radio, Indicator	14	.24A	2 [2]
-7	158	Auto, Instrument, Indicator	14	.24A	2
-10	256	Auto, Indicator, flasher lamps	14	.27A	1.6 [2]
-11	194	Auto, Instrument, Indicator. Heavy duty	14	.27A	2
-12	194A	Sidemarker. Amber silicone coating. Heavy duty	14	.27A	—
-14	1889	Auto. Heavy duty	14	.27A	2
-15	1893	Auto, Radio. Heavy duty	14	.33A	2 [2]
-16	1898	Auto, Radio	14	.33A	2
-17	168	Auto, Instrument	14	.35A	3
-18a	557	Auto. Indicator, flasher lamp	14	.42A	2.5 [2]
-19	1813	Radio	14.4	.10A	.86 [2]
-21	1892	Auto, Radio	14.4	.12A	.75 [2]
-23	216	Auto, Radio	14.4	.24A	1
-24	1826	Coin Machine	18	.15A	1.8 [2]
-25	1437	Aircraft Emergency	24	.06A	.9 [2]
-26	1818	Aircraft	24	.17A	3.3 [2]
-27	1843	Indicator [15,61]	28	.022A	.20 [2]
-28	1819	Indicator	28	.04A	.34 [2]
-29a	656	Indicator	28	.06A	.62 [2]
-30	1829	Indicator	28	.07A	1.0 [2]
-33	1862R	Indicator, Outside coated red (Special)	28	.07A	—
-34	1862G	Indicator, Outside transparent coated green (Special)	28	.07A	—
-36	757	Indicator	28	.08A	.62 [2]
-37	2188U	Special Service. Approx. ½" leads [74]	28	.08A	.62 [2]
-38	657	Indicator	28	.08A	.62 [2]
-39	1820	Indicator	28	.10A	1.6 [2]
-39a	400	Aircraft	28	.10A	1.6 [2]
-40	1821	Indicator	28	.17A	3.5 [2]
-41	313	Aircraft	28	.17A	3.5 [2]
-43	313-OF	Indicator. Outside frosted (Silicate)	28	.17A	—
-44	313R	Aircraft. Outside coated red. (Silicate)	28	.17A	—
-45	313G	Aircraft, Outside coated green. (Silicate)	28	.17A	—
-47	1864	Aircraft	28	.17A	3.0 [2]
-48	464	Aircraft	28	.17A	3.0 [2]
-49	1873	Aircraft [75]	28	.20A	3 [2]
-50	1822	Indicator	36	.10A	2.1 [2]
-51	1828	Indicator	37.5	.05A	.65 [2]
-53	1823	Indicator	48	.10A	3.3 [2]
-54	1835	Indicator	55	.05A	1.1 [2]

[2] Approximate. [4] At 14 volts. [14] Excessive wattage for bulb.
[15] Limited mechanical strength. [36] At 15.5 volts.
[61] Consult nearest Sales Office for application information.
[65] Overall length of glass parts 1.013" ± .040.
[66] Tolerance for light center length measured to top of filament ± .040".
[74] This a butt seal wire terminal lamp. The glass-to-metal seal and tip are fragile. Therefore, any bending of the wire terminals should not be closer to glass than ⅛" and soldering within ⅛" of glass seal should be avoided since the heat of the soldering can cause a leak in the seal.
[75] Estimated life based on limited test information.

PHYSICAL SPECIFICATIONS

LAMPS SHOWN ACTUAL SIZE

Base	B Vacuum C Gas Filled	Filament Designation	Light Center Length (Inches)	Max. Overall Length (Inches)	Rated Average Life (Hours)	Fig. No.	Line No.
Miniature Bayonet	B	C-2V [13]	5/8	1 3/16	200	56	28-1
Wedge	B	C-2F	.562	1 1/16	4000	58	-2
Miniature Screw	B	C-2F	15/16	1 3/16	3000	55	-3
Wire Terminal	B	C-2F	—	1.053	3000	57	-4
Miniature Bayonet	B	C-2F	3/4	1 3/16	3000	56	-5
Miniature Bayonet	B	C-2F	5/8	1 3/16	500	56	-6
Wedge	B	C-2V [13]	.562	1 1/16	500	58	-7
Miniature Bayonet	C	C-2R	5/8	1 3/16	500 [3]	56	-10
Wedge	B	C-2F	.562	1 1/16	2500	58	-11
Wedge	B	C-2F	—	1 1/16	2500	58	-12
Miniature Bayonet	B	C-2F	9/16	1 3/16	2000	56	-14
Miniature Bayonet	B	C-2F	5/8	1 3/16	7500	56	-15
Miniature Bayonet	B	2C-2R	5/8	1 3/16	7500	56	-16
Wedge	B	C-2F	.562	1 1/16	1500	58	-17
Wedge	B	C-2R	.625	1 1/16	500	58	-18a
Miniature Bayonet	B	C-2V [13]	5/8	1 3/16	1000	56	-19
Miniature Bayonet	B	C-2F	5/8	1 3/16	1000	56	-21
Miniature Bayonet	B	C-2F	5/8	1 3/16	3000	56	-23
Miniature Bayonet	B	C-2V [13]	5/8	1 3/16	250	56	-24
Miniature Bayonet	B	C-2F	5/8	1 3/16	20 [40]	56	-25
Miniature Bayonet	B	C-2F	5/8	1 3/16	250	56	-26
Miniature Bayonet	B	C-2F	5/8	1 3/16	3000	56	-27
Miniature Bayonet	B	C-2F	5/8	1 3/16	2500	56	-28
Wedge	B	C-2F	.562	1 1/16	2500	58	-29a
Miniature Bayonet	B	C-2F	5/8	1 3/16	1000	56	-30
Miniature Bayonet	B	C-2F	—	1 3/16	1000	56	-33
Miniature Bayonet	B	C-2F	—	1 3/16	1000	56	-34
Miniature Bayonet	B	C-2F	5/8	1 3/16	7500 [43]	56	-36
Wire Terminal	B	C-2F	—	1.053	7500 [43]	57	-37
Wedge	B	C-2F	.562	1 1/16	7500 [43]	58	-38
Miniature Bayonet	B	C-2F	5/8	1 3/16	1000	56	-39
Wedge	B	C-2F	.562	1 1/16	1000	58	-39a
Miniature Screw	B	C-2F	13/16	1 3/16	500	55	-40
Miniature Bayonet	B	C-2F	5/8	1 3/16	500	56	-41
Miniature Bayonet	B	C-2F	—	1 3/16	500	56	-43
Miniature Bayonet	B	C-2F	—	1 3/16	500	56	-44
Miniature Bayonet	B	C-2F	—	1 3/16	500	56	-45
Miniature Bayonet	B	C-2F	5/8	1 3/16	1500	56	-47
Wedge	B	C-2F	.562	1 1/16	1500	58	-48
Miniature Bayonet	B	C-2F	5/8	1 3/16	7000	56	-49
Miniature Bayonet	B	C-2F	5/8	1 3/16	1000	56	-50
Miniature Bayonet	B	C-2F	5/8	1 3/16	3000	56	-51
Miniature Screw	B	C-2F	13/16	1 3/16	1000	55	-53
Miniature Bayonet	B	C-2F	5/8	1 3/16	5000	56	-54

[3] Average useful life. [13] Supported. [40] At 28 volts.
[43] Design life is 50,000 hours.

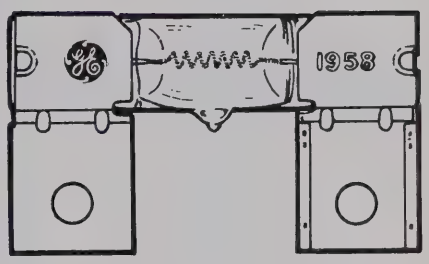


Fig. 60

Fig. 61

Line No.	Lamp No.	Primary Application	Design Volts	Design Amps or Watts	Candle Power
T-4 BULB ½ IN. (13mm) DIAMETER[2]					
30-1	1983	Aircraft Navigation. Quartz bulb [11]. Halogen Cycle	10	10A	130 [2]
-1a	1960	Instrument, Oscillograph. Quartz bulb [11]. Halogen Cycle	11	60W	90 [2]
-2	1963	Aircraft. Quartz bulb [11]. Halogen Cycle	13	75W	90 [2]
-3	1966	Aircraft. Quartz bulb [11]. Halogen Cycle	13	100W	125 [2]
-4	1479	Indicator [72]	14	.17A	1.7 [2]
-5	1480	Indicator [72]	18	.17A	2.2 [2]
-6	1841	Indicator [72]	24	.17A	3.3 [2]
-7	1958	Aircraft (Quartz bulb) [11]. Halogen Cycle	28	150W	250 [2]
-8	1959	Aircraft (Quartz bulb) filament supported [11]. Halogen Cycle	28	150W	240 [2]
T-4½ BULB 9/16 IN. (14mm) DIAMETER[2]					
-10	1467	Aircraft [75]	6.0	1.03A	6
-11	1855	Radio and TV	6.3	.80A	3.6 [2]
-12	1886	Indicator	6.3	.90A	4.2 [2]
-13	872	Instrument, Photoelectric Scanner. Burn B.U. to horiz.	8.0	.90A	9.0 [2]
-13a	500	Flashlight	9.84	.50A	4.6 [2]
-14	957	Signal	9.84	.50A	4.6 [2]
-15	965	Hand Lantern—8D or 8F cells	9.84	.50A	6 [2]
-15a	1416	Marine [14]	12.8	.80A	8 [2]
-20	1414	Aircraft	14	.46A	6
-21	1495	Aircraft [61]	28	.30A	6
T-5 BULB 5/8 IN. (16mm) DIAMETER[2]					
-23	1876	Special Service, Photoelectric scanner. Silver contact. A.A. tol. 1/64"	3.5	2.50A	6.5 [2]
-24	1876X[4]	Special Service. Photoelectric scanner. Silver contact. A.A. tol. 1/32"	3.5	2.50A	6.5 [2]
-25	1434	Instrument, Photocell exciter, Silver contact [8]	3.7	2.75A	11 [2]
-26	1874	Instrument [8]	3.7	2.75A	11 [2]
-29	1884	Instrument. Axial alignment tolerance 1/64"	6.5	1.54A	12.5 [2]
-30	1462	Special Service. Photoelectric scanner, A.A. tol. 1/64". Silver contact	6.5	2.75A	25 [2]
-31	1489	Instrument. Axial alignment tolerance 1/64"	6.5	2.75A	25 [2]
-32	1489X	Instrument. Axial alignment tolerance 3/64"	6.5	2.75A	25 [2]
-32a	912	Auto. Heavy duty	12.8	1.0A	12
-32b	906	Auto. Heavy duty	13	.66	6
-32c	904	Auto. Heavy duty	13.5	.69	4
T-7 BULB 7/8 IN. (22mm) DIAMETER[2]					
-33	1940	Aircraft, Marker [14,67]	14	3.57A/50W	75 [2]
-34	1944	Special Service. Silver contact [14,61]	14	3.57A	—
-35	1939	Aircraft Marker [14,67]	28	1.79A	75 [2]
-36	1939X	Aircraft, Marker [14,67]	28	1.79A/50W	70 [2]

[2] Approximate. [8] Bulb top selected for minimum glass imperfections.
[11] For use only where seal temp. does not exceed 350°C. Also a minimum bulb wall temperature of 250°C is necessary for halogen cycle operation.
[14] Excessive wattage for bulb.
[61] Consult nearest Sales Office for application information.
[67] Burning position — base up or base down only.
[72] This is a low voltage lamp and is not for use in ordinary household circuits. The bulb may shatter if used in circuits of 110-120 volts or higher.
[75] Estimated life based on limited test information.

PHYSICAL SPECIFICATIONS

Base	B Vacuum C Gas Filled	Filament Designation	Light Center Length (Inches)	Max. Overall Length (Inches)	Rated Average Life (Hours)	Fig. No.	Line No.
Wire Terminal	C	C-8	—	1.8	2000	—	30-1
Tab	C	CC-8	3/4	2 1/4	1000	60	-1a
Tab	C	C-8 [13]	3/4	2 1/4	300	60	-2
Tab	C	C-8 [13]	3/4	2 1/4	300	60	-3
Candelabra Screw	B	C-2V [13]	15/16	1 1/2	250	61	-4
Candelabra Screw	B	C-2V [13]	15/16	1 1/2	250	61	-5
Candelabra Screw	B	C-2F	15/16	1 1/2	250	61	-6
Tab	C	CC-8	3/4	2 1/4	300	60	-7
Tab	C	CC-8	3/4	2 1/4	300	60	-8
Miniature Bayonet	C	C-2R	5/8	1 3/8	1000	62	-10
Miniature Bayonet	C	C-2R	23/32	1 3/8	3000	62	-11
Miniature Bayonet	C	C-2R	3/4	1 3/8	3000	62	-12
Miniature Bayonet	C	C-6	—	1 3/8	50	62	-13
Miniature Screw	C	C-2R	23/32	1 3/8	200	63	-13a
Miniature Bayonet	C	C-2R	1/2	1 3/8	200	62	-14
Miniature Screw	C	C-2R	23/32	1 3/8	15	63	-15
Miniature Bayonet	C	C-2R	5/8	1 3/8	1000	62	-15a
Miniature Bayonet	C	C-2R	5/8	1 3/8	500	62	-20
Miniature Bayonet	B	C-2F	5/8	1 3/8	500	62	-21
S. C. Bayonet	C	C-6	1 1/8	1 3/4	2000	67	-23
S. C. Bayonet	C	C-6	1 1/8	1 3/4	2000	67	-24
S. C. Bayonet	C	C-6	1 1/8	1 3/4	100	67	-25
S. C. Bayonet	C	C-6	1 1/8	1 3/4	100	67	-26
S. C. Bayonet	C	C-6	1 1/8	1 3/4	125	67	-29
S. C. Bayonet	C	C-6	1 1/8	1 3/4	125	67	-30
S. C. Bayonet	C	C-6	1 1/8	1 3/4	125	67	-31
S. C. Bayonet	C	C-6	1 1/8	1 3/4	125	67	-32
Wedge	C	C-2R	.81	1.49	1000	68	-32a
Wedge	C	C-2F	.81	1.49	1000	68	-32b
Wedge	C	C-2F	.81	1.49	5000	68	-32c
S. C. Bayonet	C	C-8Z	1 1/4	2 1/4	300	69	-33
S. C. Bayonet	C	C-8Z	1 1/4	2 1/4	300	69	-34
S. C. Bayonet	C	CC-8	1 1/4	2 1/4	300	69	-35
S. C. Bayonet	C	C-2V [13]	1 1/4	2 1/4	300	69	-36

[13] Supported.

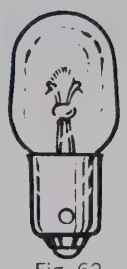


Fig. 62
(ACTUAL SIZE)

Fig. 63
(ACTUAL SIZE)

Fig. 67
(½ SIZE)

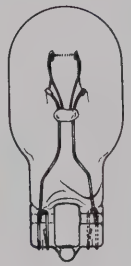


Fig. 68
(ACTUAL SIZE)

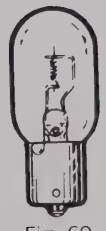


Fig. 69
(½ SIZE)

Line No.	Lamp No.	Primary Application	Design Volts	Design Amps or Watts	Candle Power
T-8 BULB 1 IN. (25mm) DIAMETER[2]					
32-1	1924	Instrument, Oscillograph [47,48,50]	4	2.50A	8 [2]
-2	1926	Instrument, Oscillograph [47,51]	11	1.00A	13 [2]
-3	1921	Instrument, Oscillograph [49,51,47]	11 11	1.00A 1.00A	—
-5	1936	Instrument, Burning position—any [55]	22	1.00A	28 [2]
-6	ML20/R-28	Aircraft, Lumiline, Red	28	20W	—
-7	ML20/IF-28	Aircraft, Lumiline, Inside Frosted	28	20W	—
T-8½ BULB 1 1/16 IN. (27mm) DIAMETER[2]					
-8	1925	Instrument, Oscillograph. Silver contacts. Filament offset ⅛" [47,48]	10	3.50A	38 [2]
TL-2¾ BULB 11/32 IN. (8.7mm) DIAMETER[2]					
-10	224	Flashlight—2 AAA cells	2.15	.22A	—
TL-3 BULB ⅜ IN. (9.5mm) DIAMETER[2]					
-11	112	Flashlight—1 AA, C, or D cell	1.2	.22A	—
-12	222	Flashlight—2 AA cells	2.25	.25A	—
-13	222X	Flashlight—2 AA cells	2.25	.25A	—
-14	2121D	Indicator. Approx. ⅝" leads—down position	2.25	.25A	—
-15	243	Flashlight—2 C cells	2.33	.27A	—

[2] Approximate.
[47] Side inside frosted.
[48] Spring supported filament.
[49] Half inside-frosted bulb entirely coated black except with window .6" high x .75" wide.
[50] Fil. approx. .60" long x .004" dia.
[51] Fil. coil approx. .32" long x .010" dia.
[55] Fil. coil approx. .63" long x .010" dia.

PHYSICAL SPECIFICATIONS

Base	B Vacuum C Gas Filled	Filament Designation	Light Center Length (Inches)	Max. Overall Length (Inches)	Rated Average Life (Hours)	Fig. No.	Line No.
D. C. Pf. (A)	C	S-6	1½	3⅛	100	71	32-1
D. C. Pf. (A)	C	C-6	1½	3⅛	200	71	-2
D. C. Pf. (A)	C	C-6	1½	3⅛	200	71	-3
D. C. Pf. (A)	C	C-6	1 13/32	3⅛	200	71	-5
Disk	B	2C-8	—	5¾ [12]	500	72	-6
Disk	B	2C-8	—	5¾ [12]	500	72	-7
D. C. Pf. (A)	C	S-8	2 5/16	4⅛	500	73	-8
Special	B	C-6	—	⅞	5	75	-10
Miniature Screw	B	S-2	—	59/64	5	76	-11
Miniature Screw	B	C-2R	—	59/64	5	76	-12
Miniature Screw	B	C-6	—	59/64	5	76	-13
Wire Terminal	B	C-6	—	13/16	5	—	-14
Miniature Screw	B	C-6	—	59/64	10	76	-15

[12] Average overall length.

Fig. 71
(½ SIZE)

Fig. 72
(½ SIZE)

Fig. 73
(½ SIZE)

Fig. 75
(ACTUAL SIZE)

Fig. 76
(ACTUAL SIZE)

FLASHER LAMPS[70]

Fig. 77

Fig. 78

General Electric Flasher-Filament[70] lamps have a bi-metal strip added to the filament mount to provide the flashing. Heat from the filament causes this strip to bend away from the lead wire, breaking the circuit. As the bi-metal strip cools it returns to its original position against the lead wire and the lamp lights.

Flasher lamps are used in a variety of services as shown in the table below.

ELECTRICAL and PHYSICAL SPECIFICATIONS

Line No.	Lamp Number	Primary [70] Application and Use	Bulb	Design Volts	Design Amps or Watts	Candle Power	Base	Fila-ment Desig-nation	Max. Overall Length (Inch)	Avg. Useful Life Hours	Fig. No.	Line No.
34-1	401	Toy[15]	G-4½	1.25	.25A	.09 [2]	Min. Screw	C-6	1 1/16	15 [3]	77	34-1
-2	406	Toy	G-4½	2.6	.30A	.43 [2]	Min. Screw	C-2R	1 1/16	50 [3]	77	-2
-3	407	Hand Lantern	G-4½	4.9	.30A	1.2 [2]	Min. Screw	C-2R	1 1/16	50 [3]	77	-3
-5	405	Signal	G-4½	6.5	.50A	1.9 [2]	Min. Screw	C-2R	1 1/16	500 [3]	77	-5
-6	455	Indicator	G-4½	6.5	.50A	1.9 [2]	Min. Bay.	C-2R	1 1/16	500 [3]	78	-6
-7	256	Auto Indicator	T-3¼	14.0	.27A	1.6 [2]	Min. Bay.	C-2R	1 3/16	500 [3]	56	-7
-8	257	Auto & Toy Train	G-4½	14.0	.27A	1.6 [2]	Min. Bay.	C-2R	1 1/16	500 [3]	78	-8
-9	258	Toy Train	G-4½	14.0	.27A	1.6 [2]	Min. Screw	C-2R	1 1/16	500 [3]	77	-9
-9a	557	Auto Indicator	T-3¼	14	.42A	2.5 [2]	Wedge	C-2R	1 1/16	500 [3]	58	-9a

[2] Approximate. [3] Average useful life. [15] Limited mechanical strength.

[70] These lamps produce a random flashing indication only. While the majority should flash between 40-160 flashes per minute at normal room temperature, some will be outside this range. As ambient temperature and/or input voltage changes, the flash rate may vary considerably.

ELECTRIC DISCHARGE[71] LAMPS—FLUORESCENT

General Electric[71] has a line of Fluorescent lamps for aircraft.

Lamps with T-5 bulbs are Rapid-Start fluorescent lamps that have specially designed, rugged cathodes for aircraft service.

Fig. 86

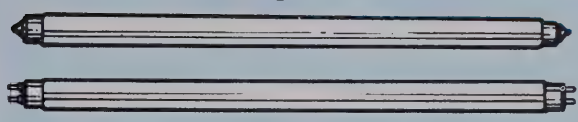


Fig. 87

ELECTRICAL and PHYSICAL SPECIFICATIONS

Line Number	Lamp[71] Number	Primary Application	Design Volts	Watts (Nominal)	Base	Maximum Overall Length (Inches)	Figure Number	Line Number
T-5 BULB 5/8 IN. (16mm) DIAMETER[2]								
35-2	**5004CW**	Aircraft, Cool white	a.c.	4	Min. Pinless	6 Nom.	86	35-2
-4	**5004WW**	Aircraft, Warm white	a.c.	4	Min. Pinless	6 Nom.	86	-4
-5	**5104WW**	Aircraft, Warm white	a.c.	4	Min. Bi-Pin	6 Nom.	87	-5
-6	**5106WW**	Aircraft, Warm white	a.c.	6	Min. Bi-Pin	9 Nom.	87	-6
-7	**5008CW**	Aircraft, Cool white	a.c.	8	Min. Pinless	12 Nom.	86	-7
-8	**5008R**	Aircraft, Red	a.c.	8	Min. Pinless	12 Nom.	86	-8
-9	**5008WW**	Aircraft, Warm white	a.c.	8	Min. Pinless	12 Nom.	86	-9
-10	**5108WW**	Aircraft, Warm white	a.c.	8	Min. Bi-Pin	12 Nom.	87	-10
-11	**5013CW**	Aircraft, Cool white	a.c.	13	Min. Pinless	21 Nom.	86	-11
-12	**5013R**	Aircraft, Red	a.c.	13	Min. Pinless	21 Nom.	86	-12
-13	**5013WW**	Aircraft, Warm white	a.c.	13	Min. Pinless	21 Nom.	86	-13
-14	**5113WW**	Aircraft, Warm white	a.c.	13	Min. Bi-Pin	21 Nom.	87	-14

[2] Approximate.
[71] Use these lamps with auxiliary equipment specially designed to produce proper electrical values conforming to established specifications. For total load, add auxiliary watts to lamp watts.

TABLE OF APPLICATIONS

AIRCRAFT

Lamp Number	Line No.
ML20/IF-28	32-7
ML20/R-28	32-6
63	12-7
64	12-8
81	12-3
301	10-42
302	10-43
303	12-37
304	12-38
305	22-8
305IF	22-9
306	22-10
307	22-15
307IF	22-16
307R	22-20
307SB	22-21
308	22-17
308IF	22-18
309	24-11
309IF	24-12
310	24-13
311	24-15
311R	24-17
312	24-17a
313	28-41
313G	28-45
313R	28-44
315	22-30a
316	26-11
356	8-37
400	28-39a
427	10-5
464	28-48
847	14-15
1047	18-4
1048X	18-5
1105	16-28
1309	6-26
1315	10-40
1317	6-18
1380	16-4
1384	16-1
1385	16-5
1385X	16-6
1414	30-20
1437	28-25
1467	30-10
1495	30-21
1503	16-14
1591IF	22-10b
1662	22-32
1665	22-28
1665IF	22-29
1665SB	22-30
1680	18-21
1680IF	18-23
1680X	18-22
1683	22-34
1691IF	22-12
1726	24-9
1726X	24-10
1777	20-40
1816	26-41
1818	28-26
1819	28-28
1820	28-39
1843	28-27
1864	28-47
1873	28-49
1939	30-35
1939X	30-36
1940	30-33
1958	30-7
1959	30-8
1963	30-2
1964	24-34
1966	30-3
1967	24-33
1968	24-32
1970	24-35
1975	24-26
1976	24-27b
1978X	24-24
1979	24-27
1982	24-31
1983	30-1
1984	24-27a
1988	24-25
2232	22-14
2233	22-27
3011	24-18
5004CW	35-2
5004WW	35-4
5008CW	35-7
5008R	35-8
5008WW	35-9
5013CW	35-11
5013R	35-12
5013WW	35-13
5104WW	35-5
5106WW	35-6
5108WW	35-10
5113WW	35-14

AUTOMOTIVE

Lamp Number	Line No.
PR16	6-17
19	8-25
53	8-29
53R	8-31
53X	8-30
55	10-17
57	10-22
57X	10-23
63	12-7
64	12-8
67	12-20
68	12-17
81	12-3
82	12-4
82AF	12-5
87	20-24
88	20-25
89	12-14
90	12-15
93	20-29
94	20-31
97	12-21
97A	12-22
97NA	12-23
105	6-25
158	28-7
161	28-2
168	28-17
192	26-41b
194	28-11
194A	28-12
198	22-4a
199	22-4b
209	6-19
210	6-20
211-2	24-26a
212-2	24-28b
214-2	24-28a
216	28-23
250	8-27
256	28-10 34-7
257	10-27 34-8
257R	10-28
293	10-34
456	10-39
557	28-18a 34-9a
558	26-41a
561	24-26b
562	24-28c
563	24-28
623	14-1
631	12-27
904	30-32c
906	30-32b
912	30-32a
1003	6-23
1004	6-24
1016	20-34
1034	20-41
1034A	20-42
1034NA	20-43
1035	20-39a
1073	20-45
1076	20-46
1095	22-5
1105	16-28
1129	20-1
1130	20-2
1133	16-22
1134	16-23
1141	20-37
1141IF	20-38
1142	20-39
1143	16-30
1144	16-31
1150	18-9
1154	20-4
1155	12-18
1156	22-4
1157	20-48
1157A	20-49
1157NA	22-1
1176	20-35
1178	12-24
1183	16-10
1195	16-32
1196	16-33
1203	22-24
1204	22-25
1209	16-20
1247	12-26
1251	12-33
1251CB	12-34
1252	12-36
1293	16-34
1295	20-28
1321	16-25
1323	16-26
1327	16-35
1383	16-2
1445	8-32
1501	16-13

AUTOMOTIVE (Cont.)

Lamp Number	Line No.
1503	16-14
1507	18-1
1563	22-27a
1591	22-10a
1683	22-34
1691	22-11
1888	26-37
1889	28-14
1891	28-6
1892	28-21
1893	28-15
1895	10-30
1895G	10-31
1895R	10-33
1898	28-16
2330	16-29
2331	16-11
2530	16-13a

BICYCLE

131	6-33
1482	10-10
1483	10-9

COIN MACHINE

63	12-7
81	12-3
1458	10-41
1487	28-3
1488	28-1
1489	30-31
1826	28-24
1829	28-30

FLASHLIGHT

PR2	6-4
PR3	6-8
PR4	6-2
PR6	6-5
PR7	6-10
PR8	6-1
PR9	6-6
PR12	6-14
PR15	6-12
PR18	6-15
PR20	6-16
13	8-10
14	8-4
31	10-12
112	32-11
123	6-32
222	32-12
222X	32-13
224	32-10
233	8-2
243	32-15
245	8-3
500	30-13a
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GENERAL ELECTRIC

PRINTED IN U.S.A.

Revised 6/75
3-5169